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THE PRODUCTION COSTS OF CONVENTIONAL AND ORGANIC APPLE ORCHARDS IN THE VENETO REGION (ITALY)

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Abstract

In times of crisis people are thinking how to make the best choice to be more profitable. Both the manufacturers and the consumers must choose the best solutions for them and their businesses. Making a choice between organic and conventional methods in times of crisis is even more difficult considering production costs and consumption patterns. What is the composition of production costs for an apple orchard, how they can be divided into homogeneous categories and why to choose green are the questions we have tried to answer in this paper.

Key words: *apple orchard, production costs, organic, conventional*

JEL classification: *Q1,Q15*

1. Introduction

Concern for the environmental degradation is caused by production activities and may be deemed to have negative economic effects with intrinsic character of the process of production and consumption, which highlights growth rates economically and demographically superior.

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Environmental pollution as a result of production activity is considered a negative factor because it determines a social cost to the company or responsible consumers are not penalized and subjects suffering the consequences are not compensated in accordance with the effective suffering caused.

2. Transition to organic farming

In the transition from the "green revolution" to organic farming, there were significant changes in terms of nutrients, pesticides, disease management and plant material (Tab. 1).

Table 1. Changes in farm management

No. crt	Types of management	"Green revolution"	Organic Farm
1	Management nutrients	- Application of organic fertilizers each season	- apply granular waste when necessary; - Manure; - Inclusion of rice straw; - rotation; - pig-manure
2	Management pesticides and diseases	- application of fertilizer or as required or during the season from time to time - use traps for mice; - weeding; - foreign varieties, resistant varieties;	- is based on natural ecological control; -repellent plants; - weeding; - traps for mice - local varieties, resistant varieties; - sprays botanical
3	Management of plant material	- Various foreign varieties; - Selection of varieties close -Exchanges of varieties between farmers	- locally grown varieties - Selection of similar varieties; - Exchanges of varieties between farmers

Source: Carpenter, 2003

If all those who adopted the style to make organic farming would be grouped in one group might say that were determined in their choice of factors and had some reason.

Estimated price of a product on the market has important implications due to the fact producers have different relationships in the market that they are associated

with transaction costs may explain why different households have different links on the market. There are several types of costs for a household but we can highlight: the proportional costs of trading and fixed costs of trading. Proportional costs of trading can increase the price paid by buyer and seller lowers the price obtained. They may contain costs that can be very difficult to notice such as "cost" of time that a farmer spends to market vegetables.

3. Statistical data regarding ecological orchards in Veneto region (Italy)

In 2010 in Italy were cultivated 22,196 hectares of organic orchards. 16,251 hectares were processed with the biological method while 5,945 hectares were in conversion. Among them were a total of 4,010 hectares of apple orchards from which 3,119 hectares planted in organic and 891 in the conventional system. In Veneto 1,632 hectares were cultivated in organic orchards, up by 13.7% compared to 2009 when it was grown only 1,435 hectares.

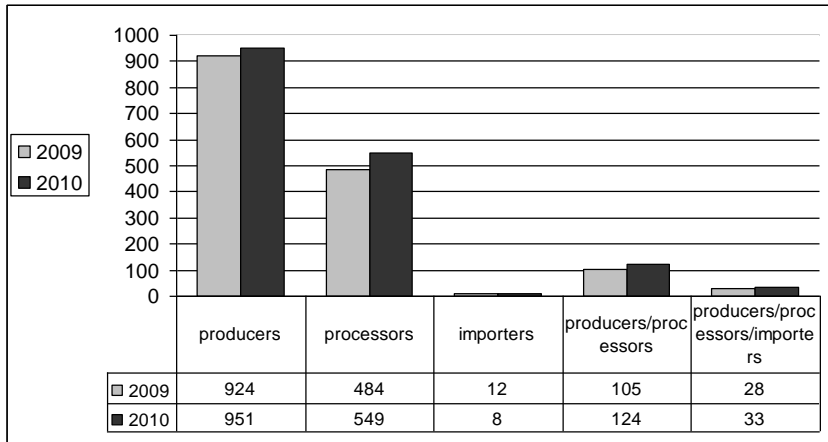
Tabel 2. Italian organic orchards surface

	In conversion (ha)	Ecologic (ha)	Total (ha)
Total orchards	5.945	16.251	22.196
Apple orchards	891	3.119	4.010

Source: SINAB (National Information System regarding Biologic Agriculture in Italy), 2011

In 2010 in Veneto region the importers of organic farming have been decreased by 33.3% compared to 2009 (Fig. 1), while the opposite trend has been registered both for producers (+ 2,9%) and for processors (13,4%).

Fig 1. Dynamic of operators in ecological system in the Veneto region



Source: SINAB (National Information System regarding Biologic Agriculture in Italy), 2011

4. Apple production

Analysis of supply of perennial crops as opposed to annual crops received less attention from researchers because of the complexity of data to those of annual crops. More than the long term, Devassos (2010) believes that the analysis is more complex because:

- Trees that are a long term investment;
- Range from planting to fruition is much higher;
- Once the trees begin to bear fruit, is an extended period of productivity and then a gradual decrease in production;
- After the trees have reached their maximum level of productivity decline are replaced

Reganold (2001) were of the opinion that in terms of economic and environmental sustainability, organic production system ranks first, ranks second integrated system and conventional system ranks last. Ecological system produces sweet and juicy apple with a higher profitability and efficiency.

Integrated production system is a system incorporating both sides of both organic and conventional parts of the system. It incorporates conventional production methods, but also it reduces the use of chemical products.

Even if a system is chosen to be organic or integrated, does not mean that this system is sustainable. To be sustainable, a farm must meet several conditions in terms

of environmental protection, high quality crop, in terms of profitability, conservation of resources and not least in terms of social responsibility term.

5. Category of costs in the production of orchards

Among the different methods that could be used to evaluate the profitability of fruit production, this study focuses its attention on the cost of producing one hectare of orchard. This method has been chosen because of it is considered more efficient in the representation of the actual market situation that is characterized by higher labour costs and frequent growth in production tools price..The study analyzes five types of costs:

- 1) cost of labour;
- 2) cost of materials;
- 3) cost for organic certification;
- 4) cost of the plant;
- 5) operating costs and capital.

The first category of costs (labour costs) defines the cost of labour required for each activity of the production process. Individual activities considered are:

- i) collection;
- ii) pruning;
- iii) thinning;
- iv) treatment plant;
- v) binding and preparation plant;
- vi) mulch;
- vii) herbicide treatments;
- viii) accommodation providers and irrigation;
- ix) visual inspections of the parasites;
- x) fertilization;
- xi) transport of fruit;
- xii) hail protection system;
- xiii) others.

The second category of costs (material costs) covers the cost of purchasing products that are used in the production process. Among the products have been considered:

- i) plant protection products;
- ii) herbicides;
- iii) mineral fertilizers;
- iv) petrol and diesel to agriculture;
- v) others.

The third category of costs (cost of organic certification) considers the costs incurred in obtaining the documentation necessary to demonstrate that the production process conforms to the standards required by the organic rules.

The fourth category of costs (cost of equipment) covers the cost of purchase of inputs that are used in the production process. Among the equipment were considered:

- i) tractor;
- ii) the moving platform;
- iii) atomizer;
- iv) irrigation pump;
- v) trailers for bodies;
- vi) rear fork;
- vii) mulching rotary;
- viii) bars herbicide treatment;
- ix) equipment rental;
- x) others.

For each item of cost has been calculated the depreciation to be charged to every productive operation considering the useful life of machinery equal to 10 years.

The fifth category of costs (operating costs and capital) covers the costs of the inputs "land" and "capital" needed to engage in the production process. Among them were considered:

- i) amortization of the orchard;
- ii) depreciation of the irrigation system and hail;
- iii) administrative costs;
- iv) rent
- v) hail insurance and equipment;
- vi) others operating costs.

For each item of cost is not directly quantifiable by the annual accounts, we calculated the depreciation rate to be charged to every productive operation by taking an asset's useful life equal to 20 years.

6. Data analysis

Data for case study on costs were analyzed from interviews conducted with farmers in the Veneto region of northern Italy. The choice was based on farm near Verona to study farms with climatic conditions as close together, given that Italy is a country with predominantly Mediterranean climate, Alpine in the north, but in the south is hot and arid.

The study was conducted also on medium and large farms, three orchards with production in biologic system compared with three that were worked with conventional system.

In terms of organization, the overwhelming majority of farms in Italy, regardless of their type are organized in cooperatives, in this case, the cooperative is the one that takes over the production and dealing with it until the end, whether the product is sold in the form which was taken from farms, whether manufactured and sold under various forms.

Farms producing organic food cooperatives were organized exclusively organic products being sold products more difficult mainly because of their high prices, while farmers were producing conventional products have direct contracts with wholesale fruit stores.

All farmers with biologic orchard were young farmers given no more than 36 years, and are interested, and looking with "an open mind" at the organic production, looking for news in the field and actively participating in market research and system development. One of the latest market analysis attended one of the farmers indirectly through the cooperative was in a hospital, which the cooperative provided organic food from its own farm. It was found that patients using organic products have had a time of healing and response to drugs much faster than others patients, leading to rapid outsourcing and decrease patient hospitalization and therefore costs of medicines are given.

Organic farmers have found a demand for such products to parents with small children or infants. Parents are interested in products without chemical products, and less treated so give their children biologic products. Pediatricians especially recommended such products because babies and young children are sensitive to different factors and can make various forms of allergies. Nurseries and kindergartens are also interested in purchasing these products.

Conventional farmers have older ages, ranging up to 75 years, but not as open to new ideas and test new methods in their orchards.

Unfortunately, because it does not practice direct sales and are members of cooperatives, organic farmers have the disadvantage of increasing the product price to the final consumer.

In terms of type of study and work time there were no significant differences, both types of farmers have specialized through university or college studies, and the firm was dealing with the owner hired full time as the main income generated in this work.

Farmers were also a taking series of training sessions, each on their specificity, fire protection, a series of annual lectures organized by the Ministry of Agriculture, courses organized by companies selling phytosanitary products for organic orchards production and those who have had a some extra training on how to organize and provide documentation for their products. In addition to these courses farmers were interested in visits colleagues from their country and other countries in order to acquire new competencies and develop new technologies. The most interesting

courses in their view were those organized by the companies producing phytosanitary products, and were the most complex.

Decisions on size and variety of trees can cause a potential harvest over time and lifetime of the orchard (Hester, 2003). These decisions may also influence the cost and profit per hectare. Apple grower determines the type of fruit characteristics such as shape, colour, flavour, resistance to pests and diseases. Horticultural techniques to track growth and fruit production are: pruning, cutting and thinning. To determine all these features, the farmer must take a series of prior decisions such as the type of apples will be grown, tree size, density, tree form, the age at which trees can be the first fruit and the age at which trees should be replaced. Each apple in turn can meet different situations and may receive different prices.

Labour is the main component of cost from the final cost. Cost per kilogram depends on variety and harvest orchard system used. Small and compact trees require less work than the tall and large crown. Fruit in a tree density may depend on tree age. Trees cutting and thinning activities are made to achieve the most profitable fruit size. If a tree that can produce a larger quantity of fruit is thinned only slightly, it may produce a few fruit next year, which will negatively affect profits. Fruit size may also be affected. A small fruit crop may be worth less than the same amount of fruit, but larger.

If we look at selling the green apples are 20-30% higher than those produced in conventional systems, which are found in higher costs of fertilizers and treatments plus the necessary documents for accreditation orchard.

Compared with Italy, Romania can have great development potential for this side of agriculture, is able to associate and cooperate in the sale of products, and has unused land which can be converted into orchards exploited to their maximum production.

Paun (2011) thinks that European farmers are more favourable than poorly organized and Romanian farmers not benefiting from economic and institutional structures functional. Access to European funds is limited by the state of Romanian agriculture, some provisions of the agreement negotiated by the high demands of EU rules on cross compliance and the difficulties of organization and institutional.

7. Conclusions

If we compare Italy orchards with those from Romania, we will see that in Italy they are primarily more developed technologically. Most of them have drip irrigation systems and cooperative agreements. Also production per hectare is higher because in Romania there are few orchards that produce intensively, with the latest technology in the treatment and processing plants.

As Furdul (2011) said we can see a very large gap between rural and urban, by changes generated at economic, social or cultural level, the urban succeeds in breaking

through the rural areas causing damages hard to be recovered. Due to the urban area characteristics it presents, it will always be an attraction for the elements that make up the countryside. Moreover, the intensification of industrialization in the cities tends to create a greater disparity and opportunities for fighting back from rural areas are scarce.

In Italy more producers pass to the organic production because it is more profitable than the conventional one, and more and more consumers are attracted to this new/old way of growing fruits and vegetables.

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ECONOMICAL SYSTEMS – NEW TRENDS FOR APPLICATION INTEROPERABILITY

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Abstract

Web Services and Service Oriented Architecture (SOA) registered an important increase in the past years. The aim of the Paper is to analyse the manner in which these technologies are used by the local business and how they can lead to the improvement of processes within enterprises. The paper includes the results of a study dedicated to determine the level of usage of these technologies in Romanian companies.

Key words: SOA, interoperability, system integration, web services

JEL classification: O33

1. Introduction

The Internet's development has fundamentally affected the architecture of informatics management systems, causing substantial changes in the way that this category of solutions is distributed and reached. This considering, one could say that gaining access to economical applications through a simple Web browser came as a necessity in a world that is characterized by dynamism and by the globalization of economical phenomena [Aamodt, 1996]. So, in the 90s, the main trend in application development was offering support and accessibility – for computers that had an internet connection – to a

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wide range of informational resources (databases and more) and applications. The testimony for this is the multitude of languages and technologies that allow the easy development of database exploitation applications through a simple Web browser. This is why scripting languages that run on servers (ASP and its follower ASP.Net; PHP; JSP etc.), are now mature technologies, that offer the possibility of developing complex Web technologies. This technologies' existence has caused changes in informational necessities and in the equipments users need. Nowadays internet connections are available not only to computers, but also to a multitude of equipment such as mobile phones and other hand-held devices. Considering these necessities, creating a universal language became a dire need [McAfee,2005]. XML is the answer to these requests, and is a new stage in the informational age, easing the data exchange between different equipments. Beside the possibility of transferring data onto these heterogeneous platforms there was also the need of creating a way of communication between them. The answer to these priorities is the Web Services technology, which is now the most efficient way of cross-application Internet communication.

2. Literature review

Web services are a standardized way of distributing Internet applications and fundamental technologies that are at the basis of this network. Also, web services offer the possibility of interconnecting a wide range of applications, which are available on different platforms and in several worldwide locations. One could say that Web technologies became an Esperanto of application communication, as the new technology opens the gate towards a new age dominated by intelligent applications that make smart decisions and Internet searches, as a basis for well-balanced decisions [Agosta,2000].

Therefore, supposing that we wish to build an expert system that manages a share portfolio, we need to keep in mind that such a system cannot function without constant market quotation updates. Plus, making an optimal decision for selling or buying is a matter of minutes, and this highly influences the efficiency of the system. If a decade ago this system was very complicated due to the lack of efficient means of cross application communication, after the development of Web applications, it became much easier. One would have to develop the classic portfolio management expert and then the link to

the outside world would be this paper's technology. The data containing the quotations will be transmitted via Internet through a web service developed by the stock market. By using the functions and procedures exposed by this Web services, the right parameters can be transmitted, and the stock market informational system will return the requested information. Plus, all of the exposed functions of the stock market system will become a part of the developed applications, and will be called for as similarly developed procedures. You will be able to schedule the automatic checking of stock market quotations and the permanent update of the local database. Things could move even further, with the possibility of inclosing a Web service for the brokerage society that would allow the expert system to not only makes the optimal choice but to implement the decision taken. This example shows how optimal communication automation actually works and how human intervention becomes unnecessary. This has a decisive role in eliminating intentional and non-intentional human errors from the entire process (Jacobides,2000).

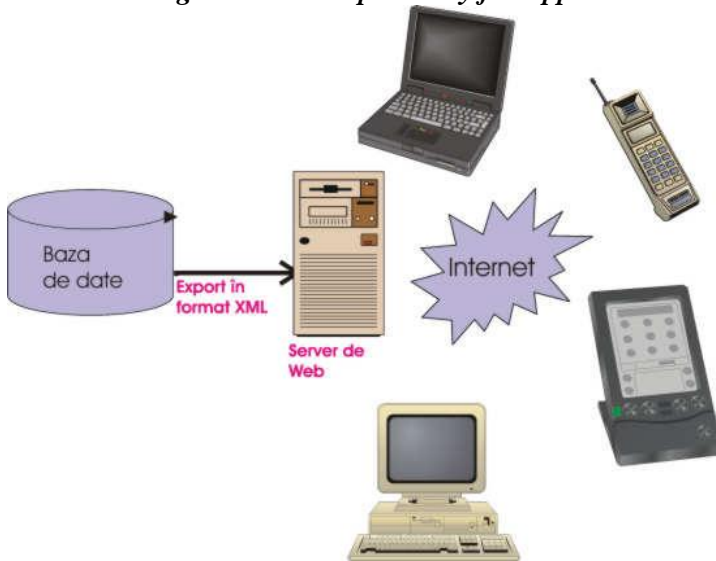
3. Service Oriented Architecture

XML or eXtended Markup Language is the basis for all of the elements behind the Web Services technologies. Considering the independence from the platform, XML is the engine behind internet data transfers, and the fundament of Web services. XML is in fact "the brother" of HTML (HyperText Markup Language), as the two have a series of resemblances. But there are some distinctions that cannot be overseen. First of all, they have a common origin - SGML (Standard Generalized Markup Language), a general language that, through mechanisms similar to those of classic grammar, offers users the possibility of electronically structuring their data [Airinei,1995]. So, practically, HTML uses a set of tags which fine the way that the information will be displayed in the browser. The set of HTML tags is limited and not Customizable, and is generated through SGML technologies. Under these conditions, there is no way for you to customize you set of tags, and this lack of flexibility is an important restraint in some cases. So, with applications that use databases, using HTML is improper for transmitting data.

Unlike HTML, XML offers users the possibility of building their own set of tags which can be used for formatting the document. This offers a high level of flexibility, as this element is necessary in defining specialized

electronic documents. Normally, you may wonder: if a general language existed - SGML, why was there a need for XML? The answer is simple – by its nature, SGML is a highly complex language, and is very hard to use on a large scale, so a simplifies system was created in the form of XML (Alter 2000,2002).

Figure 1 – Interoperability for Application



Web services are built on fundamental Internet technologies. So, for transmitting Internet technologies, these solutions use standard HTTP protocol (HyperText Transfer Protocol) and the transferred data is cased in XML files. Considering that both technologies are basic Internet elements, they will ensure the accessibility of the applications on any available platform.

Unlike Web services, its predecessors had the main disadvantage of not offering such a wide portability range. Therefore, DCOM and CORBA were not accepted by all IT&C solution providers, and this would determine limits in their usage. Considering the heterogeneity of the Internet, a technology needs to be supported by the widest possible range of users for it to be considered a universal Internet technology [5]. Plus, DCOM and CORBA technologies use binary files for transferring data and communicating between applications, and this contributes to a lower portability. Unlike these, Web

services use XML for data transfer, which consist in simple text files, ensuring a maximum range of portability. Web services use port 80 which is the standard assignation for the HTTP protocol. In comparison, the 2 alternative technologies use their own protocols for transmitting data, and this determines the necessity for additional ports on the application server. In a world that is dominated by the need for a higher security level, this disadvantage of the CORBA and DCOM technologies could have a negative impact over the entire

In conclusion, one could consider that the widespread of Web technologies in the past years comes from their compatibility with the two generally accepted technologies - HTTP and XML. Considering there advantages, the specialists from IDC (a company for surveying and analyzing the IT&C environment) consider that Web services will become the fundamental way of application distribution, surpassing all other alternative ways of application distribution (Damsgaard, 2000).

Web services are a great part of the most important application development instruments. Microsoft, Oracle or IBM –not necessarily in this order – are the main promoters of this way of application distribution, integrating advanced development instruments for serving these purposes (Forrester Research, 2009).

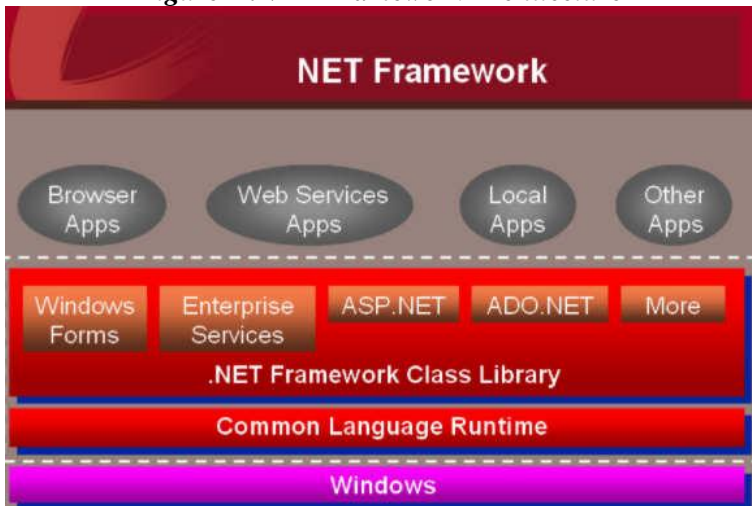
This paper has chosen Microsoft's development environment - Visual Studio.Net. I have made this choice considering its advantages as well as its wide spread among developers in our country and abroad.

The .Net version of Visual Studio, that was launched in the beginning of the year, offers an efficient way of development and of integrating Web services into one's own applications. Considering that XML stands at the basis of these technologies, most available instruments are now using this language. We must add that the ADO.NET (ActiveX Data Object) object collection, used in developing database applications, is based exclusively on this language (Iyer, 2003). Also, the new version proposes a common software framework (.Net Framework) that offers the possibility of accessing the libraries similarly by any application that has been written in a language that is compatible with this platform. Therefore, the environment shows a common application development framework, and the common element is CLR (Common Language Runtime). CLR translates any application that has been written in a language that is compatible with the technology into an intermediate language – Microsoft Intermediate Language (IL). The

applications that are available in this intermediate method can be transferred and executed onto the desired platform. This platform currently offers 21 application development languages, starting with the classic Cobol and ending with the modern C#. Our example used Visual Basic.Net. (Löwer,1995) Web services will be provided using ASP.Net technology (Active Server Page). ASP is one of the main Web technologies, offering the development of dynamic web pages with database support. The latest version (ASP.Net), offers as a main novelty the possibility of creating and distributing web services. Plus, another set of facilities is included, and here are the most important ones:

- The possibility of separating the main code of the application from the static representation code of the pages that has been written in HTML;
- ASP.Net applications can be created in one of the 21 available languages;
- ASP.Net offers a complete set of server run controls, and this contributes to a better application interface.

Figure 2 .NET Framework Architecture



4. Research

The research was realised for 38 companies that are between the first 200 from Romania considering the 2010 turnover and its main purpose was to identify how the interoperability technologies were implemented. The enterprises come from different fields, such as financial-banking, telecommunications, retail and industry.

The study was developed during December 2011-February 2012 and included a set of questions, from which we mention the most important.

1. Did you implement / Do you plan to implement a technological solution dedicated to integrated informatics system interoperability within the enterprise?

65% of the companies implement solutions for the interoperability of informatics systems, and the rest of 35% plan to implement these solutions within one year.

2. Did the interoperability technologies contribute to the improvements of processes within the enterprise?

Those companies that use the interoperability systems have come to the conclusion that interoperability technologies lead a major role for the improvements of processes. 95% of the companies have registered increased efficiency. More than 60% of the companies have registered an increased performance within the company, as well as a faster adherence to certain imposed standards.

3. Do you use integrated informatic systems with business partners?

Although most of the companies apply informatic systems destined to the interoperability of internal informatic systems, the integration with the business partners is extremely reduced. Only 6% of the companies use components that allow the interoperability of their systems with their business partners'. The main reason for this low integration is determined by the lack of national or industry standards.

4. Are the systems within the company integrated with those of public institutes?

Only 1% of the participants have informatic systems in integration with those of the public institutions (such as city halls, fiscal administration, etc.). The main reason for this situation is the lack of national standards for the systems integration with different public authorities. The lack of these standards and also the frequent changes are also the reason for the low level of implementation.

5. Which are the integrated systems categories?

The most frequent system integrations are related to web-based systems and different e-business categories (business-to-business or business-to-customer) with ERP systems (Enterprise Resource Planning) implemented by enterprises. In the financial-banking department, the integration is between the Internet Banking and core-banking systems.

5. Conclusions and implications

We are living in a world that is dominated by the need for interoperability between different informational systems running on different platforms. Under these circumstances, Web services are the technology able of efficiently solving this problem. The simplicity of Web services (simplicity that results from the compatibility with basic Internet technologies) ensures the universal acceptance of this solution as a way of communicating between applications. Plus, the relatively simple way of developing these elements will undoubtedly lead to their becoming widespread. Visual Studio.Net, by its integrated development instruments, became one of the main solutions serving this purpose.

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BETWEEN SUBJECTIVE AND OBJECTIVE IN MAKING DECISIONS ON THE ROMANIAN HIGHER EDUCATION MARKET

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Abstract

Having roots in intentional behaviours, adverse selection as part of information asymmetry is a widely – discussed concept, closely related to many sides of economics and generating the most various problems in practice. As the specific literature says, the adverse selection leads, or at least in theory should lead to market failure when no external force comes to balance its effects. Since this failure never occurs in fact, it is questionable whether the adverse selection is the only factor that influences an uninformed consumer decision, or other factors come to counterbalance the factors described by Akerloff. This paper intends to advocate the idea that as much as adverse selection, there are subjective factors having impact on the decision made on the Romanian Education Market.

Key words: *adverse selection, subjective decision making, education market*

JEL classification: *A13, D70, D79, I21*

1. Introduction

Since 1970, when Akerloff published his paper over ‘lemons’ (Akerloff, 1970), adverse selection has been awarded as an important threatening both for individuals and firms, having major implications over the results of a deal.

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Akerloff's model describes a logical mechanism by which the presence of adverse selection could lead to failure of the market, but neither the author of the article, or other economists preoccupied in this subject had ever offered details about the concrete way in which this failure happens, or about the causes for which the failure never occurs in fact.

There are two important reasons for which we have decided to focus our attention to the education market. As Philip Stevens and Martin Weale back up based on statistic evidences (Stevens and Weale, 2003), first it is generally accepted that life standards are increasing from year to year, from month to month, due to education. People are the beneficiary of education and in the same time are responsible for its existence and improvement. Secondly, econometric studies indicate that the level of education and the income of an individual seem to be directly correlated. The conclusion of this issue is a logical one, in the sense that a country could become richer based on a high level of education, as well as any individual in that country could increase his or her income based on the same education.

A wide range of studies and papers argue the strong existing connection between education and economic growth. Since 1974, when Jacob Mincer's model (Mincer, 1974) was accepted as a proper framework used to estimate returns to schooling, to schooling quality or to measure the impact of work experience on male – female gaps, economists have agreed with the existence of this relation. Despite the fact that today the Mincerian model seems to be an old fashion one, there are others models which try and succeeded in detecting the measure of the impact of education over economic growth (Heckman et al., 2003).

To conclude, we have to take into consideration on the one hand the evidences according to which education and economic growth are strongly connected to each other and on the other hand the widely accepted opinion that the role of higher education in a knowledge driven economy has never been more crucial (Mattoon, 2006) than today. In this way, we'll understand that qualitative uncertainty regarding the education process could become a threat on a macro level, being about to put in trouble one of the main engines of the economic growth.

In this paper we will bring together two of the very important concepts of Economics: adverse selection as a part of information asymmetry and university education market as a part of the economy of a country. Of course, this "meeting" between the two above mentioned concepts could lead toward

many ideas to be discussed, adverse selection and university education market being both very complex issues in economics.

Our first goal is to underline the university education market characteristics and to select those of them which, being less observable or even unobservable, can lead to rational or irrational factors involved in making decisions on this market. Adverse selection and its unpleasant consequences will be discussed along with other subjective triggers of doubtful choices. The second goal is to discuss over the Romanian specific situation, based on the lately noticed changes on the education market. These discussions will render evident some subjective aspects of the adverse selection presence in market's life and will put forward the natural question: "Is adverse selection the main threat in this context, or people's mentality, their ego and self pride, their comfort or even indolence are in fact as important as the objective causes of information asymmetry are?"

2. University Education Market – Brief Description

Searching for a proper definition of education market, we discovered that this widely used concept doesn't have a clear meaning, at least in Romanian literature. Moreover, there are situations when we grasp a kind of confusions between education market and educational services market, a fact which could lead to an unwished mix of properties and characteristics of the two markets and, consequently, to a lack of understanding in specific phenomena and behaviours.

We have to say, from the beginning, that we have no intention to recreate the still living polemics which have always been characteristic of risk definition intent. All that we try to do at this moment in time is to give a proper theoretical framework for managing the concepts, for their describing and delimitation.

The Romanian Language Explaining Dictionary shows that "education" means "the aggregate measures systematically applied in order to build up and develop the intellectual, moral or/and physical features of the striplings, people or society". From a more sophisticated point of view, education refers to the "academic and professional building up and continue learning" (Verboncu, 2007). Let's put together these definitions and the well known market definition too and we'll agree that education market has to be more or less an abstract place where it happen the meeting between the demand and

supply of education. By a similar judgment, we'll be able to define the educational services market as a framework where it could happen to find a balance between the demand and supply of educational services.

For a mindful enough person the problems regarding these descriptions arise at once. Let's take into consideration the nature of "education" as a process, an action or a plurality of actions: that means that a "product" on this market has to be characterized by some specific features about which we'll discuss in section 3. It becomes very clear too that educational services market provides tools in order to achieve the goals of education, but from a theoretical point of view yet we can't affirm that education market is enjoying the same rights as educational services market or other way round.

To continue the reasoning, let's refer to the market definition provided by marketing. Now, we are talking about "a group of consumers or organizations that is interested in the product, has the resources to purchase the product, and is permitted by law and other regulations to acquire the product". This approach to market concept lead to the conclusion that at least a side of the education market could exist for a while in the absence of educational services and this is not a surprising result. A very natural market mechanism has to create the opposite side of market, the supply of education. Of course, we can pretend that the only way the education could be performed are educational services, but we are still not sure that this put the sign of equality between the discussed markets. The final argument is deeply related with the concept of intent, being known that an economic structure is a deliberately created structure. Education means in the same time society models, cultural and religious customs, family ties, friend's opinions, as well as well defined educational structures and initiatives. These last components are afforded in an institutional framework, based on a preliminary premeditated decision of implementation and through the instrumentality of educational services. Put in this way, the identity between education market and educational services market became obvious: in order to belong to a market, any educational process has to be a deliberate one and has to be provided by an acknowledged structure.

Sequel we refer to a part of education market, named university education market, which is clearly the group of people willing to derive advantages from being student or from holding the diploma, having the resources to obtain all of these, and having no interdiction by law in this sense. Based on above considerations it is implied that university education market

includes in the same time the university educational services supply, as a set of specific training programs and a set of rules which indicates the eligibility criteria for a person to be beneficiary of these programs.

3. The implications of University Education Market definition

The above approach of the university education market needs some comments.

Firstly, the group of “consumers” that is interested in university educational services is permanently changed due some of the new trends that we’ll discuss in section 4, this making difficult to have a permanent control over the structure of the potential market. Secondly, the available market is difficult to set. In regard to educational services, the resources required to obtain a diploma are both financial and non-financial, because a student needs to be smart enough to pass the exams, willing enough to do efforts, and not only rich enough to pay the eventual school fees. The assessment of the financial possibilities could be easier than the measurement of the intellectual skills or willingness to do effort is. These last characteristics are less observable despite the wide range of tests pretending that can offer good results here and there are specialists considering that these results are sometimes to be contested (Gordon 1995).

The definition of university education market engenders many other questions, this time in regard to a possible equilibrium on this market. The neoclassical models require an independent variable in order to acquire the description of a stable position on the market, and this variable use to be the price of the product. The problem arising here is in regard to the nature of the traded product because the educational service seems to have some characteristics making the difference. A customer can buy an ordinary product and starting that moment he can use it and derive advantages from this. On the contrary, an educational service needs some years to spend and a lot of financial and/or non-financial effort to be made by the student until he or she will be able to have a new and improved position in society. By paying a tax, or obtaining a good mark to the admission exam, a student gains the right to go to school but not the diploma itself. This is the point requiring intellectual skills and wish for work and that’s why the educational service acquisition is a “stage process” in which mistakes could appear in the assessment of probability for a student to finish the studies.

4. The new trends in university education market...

As we mentioned in section 3 above, the potential market is permanently changed because facing of some trends which are the main subject of discussion below. The specialists agree that lately, the university environment has been suffering a series of important transformations which have been described as being evolution and revolution processes (Duderstadt, 1997) and which entail the most various effects. There are being discussed six trends (Pintea, 2001) which the nowadays university education must face and handle and these are: the globalization, the public finance decline, the increasing of the students' demographic and socio-economic diversity, the request for a permanent education of the adults, the unprecedented development of the informational technologies and the globalization of the university education market. The effects of these trends are being conjugated towards the need of introducing a private organizational pattern (Burbules, 2000), which must handle a context which is starting to look more and more alike the internal and external business environment seen within companies. "The entrepreneurial university" is one of the concepts which by the way in which it is described draws attention, to the fact that the new university carries on its activity on its own risk, as an independent university which is functioning within the strict parameters of costs and profits.

In detail, the idea of „entrepreneurial” aims at three aspects and these are as it follows: the university as an organization, the university members and the relation between the university and the external environment. It is brought into discussion the fact that the risks assumed by an entrepreneurial university are related to the introduction of a new practice, to the innovating of the functioning mode, to the substantial changing of the structures, or to the anticipation of the market evolution simultaneously with registering the apparition of new opportunities or perspectives. All these features mentioned here as being characteristics of the present environment in which a university carries out its activity, point to the idea of disappearance of the protection of the pre-eminent education institutions facing new existence conditions. We shall discuss each trend looking through the potential damaging phenomena angle they are involving.

Trend 1, which refers to the university education globalizing, is equally tendered and threatening. Any university would want a larger number of

students, would try to provide suitable educational programs, but it would probably be influenced by the operational risks, by the behavioural ones and last but not least by the image related risk. Even though the supplement of the students' number may bring major financial benefits, the decisions of implementing new educational programs which are meant to serve this purpose must not be taken with the risk of rebate from the quality of the educational process, being aware of the fact that one of the most important indicators which warns the institution regarding the fact that from the didactical and science research activity point of view has an unsatisfying contact with the market and it is exactly the gathering of students or teachers of doubtful quality.

Trend 2, which refers to the decline of the public financing, represents the developer of the risks specific to the first trend because trend 1 is the natural consequence of trend 2 in reality unfolding, nevertheless without the existence among them of an exclusive causality relation. On one hand, the temptation of a large number of students' conflicts with the possibilities of public financing of the pre-eminent education activities, in the same way as the reduction of this financing generates the need to detect and to obtain supplementary financing sources from the private sector. The problem of the decline of the public financing creates, besides the need of alternative sources, also the need of a suitable management from which to result a private finance portfolio which is diversified enough to expose the institution to a minimum risk.

Trend 3, the increasing of the demographic, cultural and socio-economic diversity of the students, places the university face to face with various ages, material and intellectual possibilities, with various needs, with approaches of the learning process and visions regarding the curricular preparation needs. Not at all by accident, it is emphasized the teachers' availability to guide the students who have needs or special abilities and this trend's function is of an alarm signal regarding the human resources and the process risks which aims at both teachers' component and the students' component.

Trend 4, the request for a permanent education of the adults, can represent a reason for trend 3. Students have different ages, various jobs; they come from various environments and work staffs, which differentiate one another from the attitude towards learning point of view. Regarding this trend, the risks are first of all related to the educational programs offer, as first

impact perimeter. Once the program has been implemented, we can talk about the risks regarding trend 3.

Trend 5, the unprecedented development of the informational technologies, is an important element of emphasizing the competition risk. Normally, the result is an elimination of the spatial and age barriers, giving access to the information which was once rare and expensive and allowing the appearance of the competition of those institutions which are well-known within the virtual education field. But, in some way, the competition risk inducted by this trend is probably kept down low in Romania by the very assembly of those other trends. For now, the cultural diversity, the globalizing, the age diversity determines tradition to play an important role when choosing the pre-eminent education institution. Students are looking for diplomas emitted by institutions which have credibility, experience, or ... airiness. But, in any of these cases, the students opts most of the times rather for the traditional university than for the virtual university as a consequence of the reputation formed lately by the both university education institutions.

Trend 6, the globalization, brings a multitude of transformations and, beyond the indisputable benefits, it is threatening by making disappear the institutions' means of protection when facing new competition. Thus, it generates the perfect premise for an institutional activity based on risk, probably being the closest threat for the entrepreneurial university which we have described as an entity who carries on its activity on its own risk. The manifestation of this trend makes possible the materialization of all those other trends' threats and it adds moreover the threat of widening the students' mobility borders so that the results of the institutional training to be evaluated by a large number of observers.

5. ...And their implications in the decision process

Looking at the nowadays educational supply in Romania we can observe a huge number of universities, each of them trying to make up on the rest of competitors. All that a person willing to obtain a diploma needs to do is to pick out an educational service and eventually learn. The first problem arising here is related to the selection criteria, because the school leavers feel the temptation to choose according to their own priorities, what sometime represent a completely subjective choice. Let's take into consideration the following criteria:

The first criterion is related to the importance of brand or its subjective or objective perception. Willing to purchase a qualitative educational service, the school leaver will try to become student of a faculty in a well known university. This point of view could be a proper one, but we have to ask ourselves if the brand is enough today to offer a warranty. As we mentioned earlier, the quality of the educational service is difficult to assess and the trend number one is enough for dart a doubt over the faculties' capacity to manage thousands of students. We can mention here an important institution in Bucharest getting over 35.000 students willing to find a transfer possibility to a faculty with a staff interested in human communication.

With the second criterion agree the potential students' not willing make a severe mental effort. They are always about to choose an institution able to offer them a diploma for nothing more than money and/or some personal relations used. Getting in labour market, these graduates will over asses the labour supply with all the implications here. It is the case of many private universities which offer a diploma based on yearly payments of the scholar fees, some of the graduates having serious difficulties to explain where exactly is their faculty in town.

Thirdly, there are school leavers wiling a diploma no matter in what field. They will choose the faculty based on the admission exam's difficulty level and not by thinking to their skills in the domain. The reason is that in many situations it isn't really important what kind of diploma the graduate gets, the main aspect being the possession itself which allows the holder to earn a good wage or to continue his or her academic grounding through a master degree for example.

The criterion no 4 refers to a delicate problem in a student's life. We are talking about a choice based on own resources, taking into consideration the expenditures that he or she must stand: tuition fees, house rent, or food for example. Unfortunately this criterion is a very important one, sometimes becoming the first rule of choice.

We agree with the idea that a final choice results from a combination of the four criteria above mentioned, but this does not provide a low level of adverse selection. As long as there is an important level of subjectivity in students' choices and nothing from the university side reduces the possible consequences, we consider that the low quality in teaching follows from a well known and well accepted mechanism. The issues are important for students and university, too. We can agree with the idea that a student is both input and

output during the educational period, and because of this approach the adverse selection problem arises from two angles.

Firstly, a student never knows the real quality of the educational service, which means that he or she could make an adverse choice. Of course, the student can change the choice by changing the institution, but this would lead to supplementary costs, and these are sometimes non-financial ones.

Secondly, a university doesn't really know the level of an applicant that has passed the examination. However, this low quality could harm the carrying out of quality standards, the reputation and in this way will increase the probability that a future applicant is a low quality one. Again, we face the idea of adverse choice, this time from the faculty's side.

6. Conclusions

Adverse selection can be viewed as a pure risk, to the extent in which an individual can encounter it, but as long as we are conscious of its presence it becomes a risk factor in regard to the expected results. Maybe, information asymmetry represents a natural result of human behaviour. In the days of the entrepreneurial university each institution will assert that it is the best choice for a student and will try to prove this. In the same time, a student will behave in a similar way trying to impress the university staff with his or her skills. Sometimes the assertions are true, sometimes they are not.

The main problem is that nowadays the universities are too busy to find out the applicant motivation and abilities or to detect objective selection criteria. On the other side, an applicant that passes the admission examination could have the big surprise in his or her life to discover that in fact the wanted quality standard is only a nice story. In both situations, adverse selection is going to alter the natural mechanisms on the university education market. Usually, any fear in regard to the quality of a good or service belonging to a market could have an institutional support, in the sense that in each country we find national warranty organisms. Of course, Romanians know this but we are wondering to which extend we could trust these institutions and how much risk is possible to cover this kind of "insurance", as long as the educational service is probably the only traded "good" in our economy which has nothing to do with the warranty practices.

An important part of educational market proves a really need and wish of education, but we can't neglect on the demand side those individuals

willing to be like the next man and on the part of supply those university institutions allowing any rules just for earning scholar fees. The well known economic growth models having education as independent variable are then about to fail twice because apart the unobservable characteristics implied in the model they have to face a second bias due to a real adverse selection on the market.

Despite the important percent of bad products of the university education market, sometimes warranted in the light of certain personal relationships or of interests group, we can see that the changes that Akerloff predicted in his paper are still not happening. Could then the reason be strongly related to the personal and subjective and completely heterogeneous incentives of the human capital involved in this market?

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NATIONAL COMPETITIVENESS – SCENARIOS FOR ROMANIA

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Abstract

Competitiveness remains a continuous concern of nations in any stage of development, from factor based economy to innovation based economy. The present paper aims to emphasize the current level of national competitiveness of Romania, on one hand, and to identify possible ways to improve the current level by building scenarios in order to eliminate the uncertainty, on the other hand. The paper proposes four scenarios for increase GCI (growth competitiveness index) and four scenarios from pessimistic point of view (in these scenarios GCI will be decrease). In the near future, Romania must improve their pillars of national competitiveness and must increase their GDP per capita for transition process to stage three of development.

Key words: *national competitiveness, pillars, stage of development, scenarios, Romania*

JEL classification: *O10, O40*

1. Literature review

The issue of national competitiveness is a matter of considerable important to both managers and public policy makers alike (Thompson 2004). In his opinion the notion of national competitiveness is “controversial and has both (1) a narrow, concise conception that relates primarily to cost conditions as determined by exchange rate, and (2) a broader, more nebulous conception that comprises the institutional and systemic circumstances of an economy, such as legal, governmental, public policy and other factors framing countries’ wider business environments”.

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Aiginger (2006), Kao (2008) and Onsel (2008) define competitiveness as the ability to create welfare, the relative ability of a nation to create and maintain an environment in which enterprises can compete so that the level of prosperity can be improved and suggest also that each comprehensive assessment of competitiveness should contain an outcome evaluation and a process evaluation, on one hand, and must be compared to other nations of similar economic development, on the other hand.

In this context, the aim of macroeconomic policy is very important in order to achieve simultaneous internal and external balance in the short run and of as rapid growths of living standard as possible in the long run (Boltho 1996).

Competitiveness is “our ability to produce goods and services that meet the test of international competitiveness while our citizens enjoy a standard of living that is both rising and sustainable.” This definition is given by the Council of Economic Advisors Chairman Laura D'Andrea Tyson's. According to Krugman (1996) the concept of competitiveness is “elusive or meaningless when applied to national economies; for economies with little international trade, competitiveness is a specifically maintained to be a funny way of saying productivity”. Other authors consider that international competitiveness is said to occur whenever the economic welfare of a nation is advanced through an increase in the flow of trade or through an alteration in the conditions of trade starting from a presumed initial equilibrium (Coldwell 2000).

Marsh and Tokarick (1996) emphasized that the competitiveness of an economy is based on real exchange rate indicators using consumer prices, export unit value, unit labor costs.

According to the well known Porter's diamond model (1990) the determinants of national competitive advantage are:

- (1) Factor conditions, broken down into basic factor conditions and advanced factor conditions;
- (2) Demand conditions, such as the degree of sophistication of buyers, market size and so on;
- (3) The role of related and supporting industries through coordination and sharing activities in the value chain in promoting competitiveness; and
- (4) Firms' strategy, structure, and rivalry, such as the ways in which they are managed and choose to compete.

Change and government are also two external variables that interact in the “diamond” of competitive advantage. The nature of a country's

international competitiveness depends upon the type and quality of these interactions. The four determinants for a nation shape the environment in which local firms compete and promote or impede the creation of competitive conditions (Liu and Hsu 2009).

From Siggel (2006) point of view “countries may compete for market share or for foreign investment, but the attribute of stability, good government and profitable investment opportunities, are better summarized as a favorable business climate than competitiveness”. He has made a survey in order to compare different way to measure international competitiveness taking into consideration the concept and their characteristics.

Given the complexity of the concept and of its consequences, it is obvious that the determinants of the international competitiveness of an economy are very heterogeneous – in time and in space; in order to accurate identify, evaluate and measure the dynamics of competitiveness – in volume, as well as in structure, WEF identified and developed (within the Global Competitiveness Report that it prepares each year) 12 pillars of competitiveness. These pillars are described below:

(1) *Institutions*. The institutional environment is determined by the legal and administrative framework within which individuals, firms, and governments interact to generate income and wealth in the economy.

(2) *Infrastructure*. Extensive and efficient infrastructure is critical for ensuring the effective functioning of the economy, as it is an important factor determining the location of economic activity and the kinds of activities or sectors that can develop in a particular economy.

(3) *Macroeconomic stability*. The stability of the macroeconomic environment is important for business and, therefore, is important for the overall competitiveness of a country.

(4) *Health and primary education*. A healthy workforce is vital to a country's competitiveness and productivity. Workers who are ill cannot function to their potential and will be less productive. Poor health leads to significant costs to business, as sick workers are often absent or operate at lower levels of efficiency.

(5) *Higher education and training*. Quality higher education and training is crucial for economies that want to move up the value chain beyond simple production processes and products.

(6) *Goods market efficiency.* Countries with efficient goods markets are well positioned to produce the right mix of products and services given their particular supply-and-demand conditions, as well as to ensure that these goods can be most effectively traded in the economy.

(7) *Labor market efficiency.* The efficiency and flexibility of the labor market are critical for ensuring that workers are allocated to their most efficient use in the economy and provided with incentives to give their best effort in their jobs.

(8) *Financial market sophistication.* The recent financial crisis has highlighted the central role of a sound and well-functioning financial sector for economic activities.

(9) *Technological readiness.* In today's globalized world, technology has increasingly become an important element for firms to compete and prosper.

(10) *Market size.* The size of the market affects productivity since large markets allow firms to exploit economies of scale. Traditionally, the markets available to firms have been constrained by national borders. In the era of globalization, international markets have become a substitute for domestic markets, especially for small countries.

(11) *Business sophistication.* Business sophistication is conducive to higher efficiency in the production of goods and services. This leads, in turn, to increased productivity, thus enhancing a nation's competitiveness. Business sophistication concerns the quality of a country's overall business networks as well as the quality of individual firms' operations and strategies.

(12) *Innovation.* The final pillar of competitiveness is technological innovation. Although substantial gains can be obtained by improving institutions, building infrastructure, reducing macroeconomic instability, or improving human capital, all these factors eventually seem to run into diminishing returns.

The World Economic Forum divides countries in 5 stage of development taking into consideration the level of GDP per capita and the key driven of an economy (Table 1).

Table 1. The pillars of competitiveness and stages of development

Competitiveness pillars \ Stage of development	Factor-driven economies Stage 1	Transition from stage 1 to stage 2	Efficiency-driven economies Stage 2	Transition from stage 2 to stage 3	Innovation-driven economies Stage 3
Basic requirements	60%	Transition from stage 1 to stage 2	40%	Transition from stage 2 to stage 3	20%
Efficiency enhancers	35%		50%		50%
Innovation and sophistication factors	5%		10%		30%
Total (%)	100		100		100
GDP per capita (US\$)	< 2000	2 000-3000	3000-9000	9 000-17000	> 17000

2. Data and scenarios for Romania

Romania's economy is characterized by a series of **constraints** such as: lack of long-term national and sectoral strategies leading to lack of predictability; corruption and lack of competent personnel in public administration; poor transport infrastructure and insufficient electricity distribution network; failure to access available EU funds compared with other EU states (Romania Competitiveness Report, 2011). Despite that Romania has a series of **competitive advantages** like: market size - Romania being the 7th in size within EU - and strategic geopolitical location; labor force – relatively low cost due to low salaries, available multilingual, creative, talented, flexible workforce, available technical and sector-specific skills; availability of national natural resources; opportunity for large infrastructure projects/investments - water supplies, sewage systems, roads, railways, underground transportation networks, etc; flat tax; friendly, welcoming culture and mentality (Romania Competitiveness Report, 2011). The main sectors that

are able to create competitive advantage for Romania are ICT, agricultura, energy, tourism.

According to Dobrescu (2010) the competitiveness of the Romania ought to be sustained in the following directions: „reduction in production costs simultaneously with the improvement of the quality of products, which are decisive: actively participation in the international efforts against protectionist tendencies, wich means that the exporting firms must be stimulated and assisted to penetrate new markets, especially in more dynamic economic areas; maintaining the exchange rate at a reasonable level is also important”.

Romania is an efficiency-driven economy with a GDP per capita of 7.542 US\$ in 2010, GDP per capita that placed it in stage 2 of development. It is on the 77th position on the Global Competitiveness Rank. According to Global Competitiveness Report notable competitive advantages are: at the 2nd pillar Infrastructure – mobile telephone subscriptions; at the 5th pillar Higher education and training – tertiary education enrollment rate and quality of math and science education; at the 6th pillar Goods market efficiency – time required to start a business, prevalence of trade barriers and trade tariffs; at the 9th pillar Technological readiness – broadband internet subscriptions and internet bandwidth; at the 10th pillar Market size – domestic and foreign market size indexes (See table 2).

Table 2. Pillars of competitiveness and notable competitive advantage for Romania

GCI pillars	Score 2009/20 10	Score 2010/20 11	Score 2011/20 12	Romania's notable competitive advantage
Basic requirements	4.1	4.4	4.3	
1 st pillar: Institutions	3.7	3.7	3.5	Business cost of terrorism
				Business cost of crime and violence
				Organized crime
				Strength of investor protection
2 nd pillar: Infrastructure	2.7	3.4	3.4	Mobile telephone subscriptions
3 rd pillar: Macroeconomic environment	4.6	4.5	4.5	Government debt
4 th pillar: Health and primary education	5.5	5.8	5.7	HIV prevalence
Efficiency enhancers	4.3	4.2	4.1	
5 th pillar: Higher education and training	4.3	4.5	4.4	Tertiary education enrollment rate
				Quality of math and science education
6 th pillar: Goods market efficiency	4.2	4.1	4	Number of procedures required to start a business
				Time required to start a business
				Prevalence of trade barriers
				Trade tariffs
7 th pillar: Labor market efficiency	4.3	4.3	4.1	Redundancy costs
				Pay and productivity
8 th pillar: Financial market development	4.4	4	3.9	Legal right index
9 th pillar: Technological readiness	3.8	3.8	3.8	Broadband internet subscriptions
				Internet bandwidth
10 th pillar: Market size	4.5	4.4	4.4	Domestic market size index
				Foreign market size index
Innovation and sophistication factors	3.4	3.2	3.2	
11 th pillar: Business sophistication	3.8	3.5	3.5	-
12 th pillar: Innovation	3.1	2.9	2.9	-
GCI	4.1	4.2	4.1	

*Source: Data collected from WEF, GCR 2009-2010, 2010-2011, 2011-2012
(See Annexes 1a, b, c)*

GCI it is calculated according to formula:

$$\text{GCI} = 0.4 \times \text{BR} + 0.5 \times \text{EE} + 0.1 \times \text{ISF}$$

Where,

BC – score of Basic requirements

EE – score of Efficiency enhancers

ISF – score of Innovation and sophistication factors

2.1. Base scenario

It will be considered as base scenario the result from 2011/2012 report.

GCI pillars	Score 2011 /2012
Basic requirements	4.3
1 st pillar: Institutions	3.5
2 nd pillar: Infrastructure	3.4
3 rd pillar: Macroeconomic environment	4.5
4 th pillar: Health and primary education	5.7
Efficiency enhancers	4.1
5 th pillar: Higher education and training	4.4
6 th pillar: Goods market efficiency	4.0
7 th pillar: Labor market efficiency	4.1
8 th pillar: Financial market development	3.9
9 th pillar: Technological readiness	3.8
10 th pillar: Market size	4.4
Innovation and sophistication factors	3.2
11 th pillar: Business sophistication	3.5
12 th pillar: Innovation	2.9

$$\text{GCI} = 0.4 \times 4.3 + 0.5 \times 4.1 + 0.1 \times 3.2 = 4.1$$

Changes from base scenario that have an impact on GCI score:

	Optimist scenario	Pessimist scenario
Basic requirements (4.3)	Increase with 0.1 points	Decrease with 0.1 points
Efficiency enhancers (4.1)	Increase with 0.1 points	Decrease with 0.1 points
Innovation and sophistication factors (3.2)	Increase with 0.1 points	Decrease with 0.1 points

2.2. Optimist scenarios

Optimist scenario when Basic requirement increase with 0.1 points from base scenario

$$\text{GCI} = 0.4 \times 4.4 + 0.5 \times 4.1 + 0.1 \times 3.2 = 4.13$$

Optimist scenario when Efficiency enhancers increase with 0.1 points from base scenario

$$\text{GCI} = 0.4 \times 4.3 + 0.5 \times 4.2 + 0.1 \times 3.2 = 4.14$$

Optimist scenario when Innovation and sophistication factors increase with 0.1 points from base scenario

$$\text{GCI} = 0.4 \times 4.3 + 0.5 \times 4.1 + 0.1 \times 3.3 = 4.1$$

In the most optimistic scenario it can be considered that BC is 4.4, EE is 4.3, and ISF is 3.4. These values are scores that the three variables have registered in the past 3 years. In this scenario, GCI score is:

$$\text{GCI} = 0.4 \times 4.4 + 0.5 \times 4.3 + 0.1 \times 3.4 = 4.25$$

2.3. Pessimist scenarios

Pessimist scenario when Basic requirement decrease with 0.1 points from base scenario

$$\text{GCI} = 0.4 \times 4.2 + 0.5 \times 4.1 + 0.1 \times 3.2 = 4.05$$

Pessimist scenario when Efficiency enhancers decrease with 0.1 points from base scenario

$$\text{GCI} = 0.4 \times 4.3 + 0.5 \times 4.0 + 0.1 \times 3.2 = 4.04$$

Pessimist scenario when Innovation and sophistication factors decrease with 0.1 points from base scenario

$$\text{GCI} = 0.4 \times 4.3 + 0.5 \times 4.1 + 0.1 \times 3.1 = 4.08$$

In the worst scenario it can be considered that BC is 4.1, EE is 4.1, and ISF is 3.2. These values are scores that the three variables have registered in the past 3 years. In this scenario, GCI score is:

$$\text{GCI} = 0.4 \times 4.1 + 0.5 \times 4.1 + 0.1 \times 3.2 = 4.01$$

3. Conclusions

Unfortunately, according to last Global Competitiveness Report 2011-2012, Romania has lost 10 positions from the last report (currently 77 ranks). This means that Romania has serious problems with almost all pillars of competitiveness from basic requirements to innovation and sophistication factors (See Annex 2).

According to optimistic scenarios that were built, GCI score will increase from base scenario with: 0.03 if basic requirement score increase with 0.1 points, 0.04 if efficiency enhancers score increase with 0.1 points. In the most optimistic scenario it can be considered that BC is 4.4, EE is 4.3, and ISF is 3.4. These values are scores that the three variables have registered in the past 3 years. In this scenario, GCI score is 4.25 with 0.15 points higher from base scenario.

According to pessimistic scenarios that were built, GCI score will decrease from base scenario with: 0.05 if basic requirement score decrease with 0.1 points, 0.06 if efficiency enhancers score decrease with 0.1 points. In the worst scenario it can be considered that BC is 4.1, EE is 4.1, and ISF is

3.2. These values are scores that the three variables have registered in the past 3 years. In this scenario, GCI score is 4.01 with 0.09 points less from base scenario.

In conclusion, Romania must learn from the experiences of other countries in order to increase the national competitiveness and must deal with the problematic factors that affect business environment.

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CREATIVITY, INNOVATION AND CHANGE IN KNOWLEDGE-BASED ORGANIZATION

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Abstract

The innovative - creative potential of an organization is determined by the creative capacity of its members, by its managerial team competency and by certain mechanisms to sustain implementation of new ideas, as well as their transformation in competitive products and services. From the premise that knowledge-based modern organization is permanently connected to changes of business environment, the paper aims to underline the essential role of creativity and innovation in projecting and implementing organizational change programmes. Also, the paper presents possible directions of action recommended to nowadays organizations for the transition to knowledge-based organization stage.

Key words: *creativity, innovation, change, knowledge-based organization.*

JEL classification: *D83, D90, M10, M21.*

1. Introduction

Last decades, society changed in a more alert manner. In Europe and around the world, accelerated implementation of new technologies and expanding globalisation phenomenon determined a radical shift from

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traditional production and innovation services. Gradually, plants are replaced by creative communities, which use as raw material imagination, the capacity to create and innovate (European Commission, 2010a).

Within new knowledge-based society and economy, immaterial values generate more and more material values, in a context in which consumers are in search of new and stimulating experiences. Capacity to create experiences and social networks is, nowadays, an essential factor of competitiveness.

To maintain competitiveness in a global context of great changes, economically, socially, technologically, culturally and so on, Europe must create the necessary environment for innovation and creativity to develop in the frame of new entrepreneurial culture (Barosso, 2009).

Knowledge – based society and economy presume materialization on a superior level of knowledge, as main component of intellectual asset of a nation. In such a society and economy, knowledge, as result of knowledge process, is main source of national, organizational and individual competitive advantage. Growth of activity's complexity, society computerization, as well as accelerated rhythm of technical changes and technologies need new competencies, as a result of knowledge accumulation, developed by a continuous learning process. Therefore, in knowledge – based society and economy, human resources are permanently involved in learning processes on institutional level (in schools, colleges, universities, academies and so on), as well as on organizational level (in private organization, non profit and public).

American professor Peter F. Drucker appreciated that “knowledge – based society will become, inevitably, more competitive than any known human society, for simple reason that along with increase of information access, lack of performance will no longer have any excuse. There will not be any “poor” countries, though only ignorant countries. Same principle will apply to companies, industries and organizations of all sorts. Actually, it will apply equally with persons.

Famous Romanian scientist, Mihai Drăgănescu, believes that knowledge society, as a new stage of information era, such as informational society, ensures dissemination without precedent of knowledge towards citizens by new means, using with priority the internet, e-book and learning methods by electronic procedures (e-learning). Knowledge society follows expansion and study of scientific knowledge and truth on existence, being the only way to ensure a sustainable society on ecological point of view. Also, such a society will represent a new stage in culture, based on knowledge

culture, which involves all sorts of knowledge, including artistic knowledge, literary knowledge and so on (Drăgănescu, 2002).

Knowledge – based society represents a society built on innovation and continuous formation of its members, which are supported by a wide community of researchers, academicians, engineers, reunited in a network of universities, research centres and innovative firms, offering high-tech products and services which use and materialize information (World Science Forum 2009).

2. Creativity – innovation – competitiveness. An European perspective

Creativity and innovation have a fundamental role in increase of organizational competitiveness, including in economic, social and cultural development of a nation. In the context of new society and of new sketched economy, the role and significance of scientific and technological knowledge for economic activities have drastically changed, more persistent and credible being the point of views which support the necessity to redefine, theoretically, the innovation concept itself and frame it in a systemic model, more complex than the traditional one, adequate to the contemporary realities and, on practical level, to bring change in innovation politics linked to new requirements (Iancu, 2006).

The creative – innovative potential of an organization is determined by creative capacity of its members, as well as projection and implementation of new strategies and politics which sustain generation, experimentation and application of new ideas, such as their change into tangible goods (products and services) and intangible goods (know – how).

Creativity represents the ability to see a challenge or an issue into a new light and to find, thus, solutions which by then weren't obvious. Creative people develop a habit in thinking more open and more flexible, anticipate and aim invent thing and new modalities of thinking. Radical creativity can change the world. It could be as practical as creativity applied to day-by-day issues, but has long term effects and does not yield even facing the most unreasonable and utopian hopes (Weston, 2008).

Creativity reunites an unitary ensemble of subjective and objective factors, which lead to product accomplishment by individuals or groups (as the result of a process) original and valuable (Bucurean, 2001).

Creativity implies to have an idea, and innovation to have the method to implement the idea. As a consequence, creativity is essential for innovation.

Promoting creative – innovative activities, European organizations benefit from support nationally and communitarian. Thus, European Union developed states have adopted strategies and politics of creativity and innovation stimulation, which to ensure passage to new economic, social and institutional structures, specifics of society and economy based on knowledge.

On communitarian level, the campaign developed by European Commission in 2009, surnamed “European year of creativity and innovation”, had as main objective promoting several creative and innovative actions in certain sectors of human activities, such as awareness concerning the importance of creativity and innovation for personal, social and economical growth. A key-factor for future economic growth is full development of innovation and creativity potential of European citizens, which are based on European culture and scientific excellence (Council of the European Union, 2008).

Projects developed by the European Commission in the campaign conducted during 2009 have included the following major directions (European Commission, 2009a):

- cooperation between member states in areas such as education, culture, business and employment;
- creating closer bonds between arts, business, schools and universities;
- raising awareness among youth on entrepreneurship;
- development of innovative behaviour in public and private organizations.

Creative thinking is the key to success in a global economy, fact acknowledged by the European Union long ago.

Innovation is an integral part of the European Commission climate change package and its plan to revive the European economy, set in the Europe 2020 strategy.

Today's world is based on rapid innovation. As it moves to a knowledge-based economy, the European Union as a whole and organizations must develop innovative creative potential through greater openness and responsiveness to change.

Danuta Hübner, former Commissioner for Regional Policy states that "due to ever fiercer competition and the important global challenges,

innovative practices and creative solutions represent a springboard to economic growth and prosperity of our regions and countries. Skills, ideas, processes: all combine to help us gain a competitive advantage. Europe should not react to the current crisis by reducing investment into skills and innovation. We have to trust and to rely on the quality of our ideas and our ability to adapt."

Creativity is the ultimate source of innovation, transforming creative ideas into products and services.

Creativity and innovation can not lead to sustainable economy without respecting cultural diversity, which is itself a source of creativity and innovation (European Commission, 2009b).

The results of the campaign conducted by the European Commission under the slogan "Imagine. Create. Innovate. "were synthesized in the" Manifesto for creativity and innovation in Europe ", which gathers seven priority directions of action and is also the support of Community Strategy for creativity and innovation for the period 2010-2020.

European Union maintains by active politics creative-innovative processes, fact emphasized by the Programme of political cohesion for 2007-2013, in which creativity and innovation are appreciated as durable development sources. Thus, over 86 billion Euros, representing 25% structural funds' total, were assigned to Innovation Agenda, which includes research and innovation, ICT exploitation (Information and Communication Technologies), measures for entrepreneurial spirit, such as innovation at workplace.

On what concerns the Initiative "An Union of Innovation", stipulated in Strategy Europe 2020, European Commission will act on following coordinates (European Commission, 2010b)>

- improvement of frame-conditions for allowing enterprises to innovate, creating an unique European brevet and a specific brevet court, modernization of royalty and trademarks protection;
- launching European partnerships on innovation between European Union and national levels, in order to accelerate development and use of necessary technology to answer today's challenges;
- development of the role of communitarian tools of innovation sustainability (i.e. structural funds, funds for rural development, Frame-Programme of research-development,

Frame-Programme for competitiveness and innovation, SET plan), including by a tight collaboration with European Bank of Investment;

- promoting partnerships on what concerns knowledge and consolidation of bonds between education, enterprises, research and innovation, including by the European Institute of Innovation and Technology (EIT), such as promotion of entrepreneurial spirit for support of young innovative enterprises.

3. Organizational change through creativity and innovation

Creativity and innovation allow organization to foresee change, to develop new technologies, to create new products, services and operational methods. Modern knowledge-based organization must permanently be connected to changes of the business environment. Thus said, organization based on knowledge is an organization specialized in change which, according to Rosabeth Moss Kanter, professor of management at Harvard Business School, anticipates, creates and reacts efficiently to change (Kanter, 2006).

The creative-innovative behaviour of human resources, such as their implication in organizational change processes must become a way of life. Knowledge-based organization is oriented to future, and managers and entrepreneurs have a proactive strategic view on business approach. Such a managers' and entrepreneurs' vision is reflected on the behaviour of organization's human resources, which must act same involvement in current organizational issues as well as in change projects.

Modern knowledge-based organization is also a learning organization. In such an organization, are developed and grown new thinking models, human resources are permanently engaged in learning for gaining competencies and each experience is an opportunity to learn.

Organizational change covers a series of activities which the firm is prepare to gain competencies necessary to adopt a new management strategy. Hence, successful projection and implementation of an organizational change presume, along with creativity and innovation, new competencies, resulted by accumulation of knowledge, which are acquired by members of an organization through continuous learning.

In our opinion, investment in education and implication of human resources in continuous learning process, represent important coordinates of knowledge-based organization. It is essential that managers, through their strategic vision, to induce employees the need for change and to imprint a pro-change pro-learning attitude. Thus it creates a stimulating organizational climate, dynamic and propitious to reach operational excellence, with beneficial long-term effects within firm competitiveness.

Knowledge-based organization, change oriented, produces three categories of intangible values, useful in initiation and efficient implementation of strategic organizational change:

- concepts (ideas and technologies resulted from creative-innovative activities);
- competence (capacity to satisfy more the exigencies of those who make the request);
- connections (creating some partnerships or strategic alliances in order to expand firms' influence, as well as to value new opportunities in business).

Organizational change presumes modification of organization mission and vision, introducing new technologies, a modern system of performance evaluation, reengineering payment system, orienting towards new target-groups of clients, as well as applying to complex managerial methods such as management through objectives, management through projects, management through budgets, total quality budget and so on (Nica, 2006).

Organizational change corresponds to a new orientation, fundamental and radical, concerning manners organizational undergoing activities, with essential implications on all its members' behaviour. Launching a changing process is being aware of need for change, expressing change desire, accumulation of knowledge such as formation of necessary abilities in change implementation.

A series of authors appreciate that organizational change must be approach as a phenomenon which is the result of interactions between economical, technological, social, political factors which act on the environment.

Variables involved in a process of organizational change are, in our opinion, strategic view, objectives, organizational structure, technologies, organizational culture and management techniques. Lead actors of change, human resources – entrepreneurs, managers and employees – create and

implement organizational change project, linking reminded variables and coordinating interactions between them. Most of the organizations, strategic view and objective system are not adequately linked. Entrepreneurs and managers must have the capacity to communicate their employees the strategic vision and enterprise mission. Unfulfilled objectives, inadequate communication between different hierarchical steps, lack of management involvement are obstacles in changing process.

Organizational changing process implies applying systems, methods and managerial techniques which lead to reaching objectives specific to new firm's strategic orientation. Management practice aim the accomplishment of new connections between human resources and organizational activities, such as new rules and principles to govern labour processes within the firm. If employees are not motivated to execute their tasks or do not understand the connection between their objectives and the firm's, a "system incoherence" will appear which imposes analyse and solving in order to bring success to change initiative within the firm (Trahant, W., Burke, W., 1996)

Trinomial "creativity – innovation – change" is, therefore, the fundament of proactive, flexible and innovative management, by which modern, knowledge-based, organization, as an entity of new society and economy, constantly creates competitive advantages reported to competition firms.

4. Recommendations for today's organizations for transition to knowledge-based organizations stage

In our opinion, action horizons recommended to today's organizations, for transition to the stage of knowledge-based organizations, must subscribe to the following major coordinates:

- practice strategic management on wide scale;
- promoting an organizational climate towards creativity and innovation;
- operationalization of certain politics and programmes for developing human resources;
- creating and developing new evolutionary culture models, towards result and economic performance;
- organizational partnerships implication, along with universities and research institutes.

To be permanently connected to change, organizations must implement an integrated system of strategic management. Implementation opportunity of strategic management is supported, on one side, by growing turbulence of the environment and, on the other side, by multiple advantages this manner of foreseeing management brings (unity of view and actions at every hierarchical level, the demand of certain state of mind governed by interest and openness to new, capacity to detect emergent opportunities and so on).

Practically, strategic management is necessary in every step of the firm's life cycle. In every step – launch, growth, maturity, decline – the organization is confronted with new challenges specific to development stage, and strategic management is a source of competitive advantage on long term.

Our point of view is that organization can choose a procedural strategic management structured on three stages: strategic planning, launch or implementation of strategy and evaluation of strategy. The essential stage of strategic management process, strategic planning, includes three phases: analysis-diagnosis, organizational change and strategy projection. Succession of these phases of strategic planning must be seen in a correlative and interdependent vision, which means strategy is gradually sketched along the analysis – diagnosis and organizational strategic change. In strategy projection phase is finalized, based on information obtained in first two stages of strategic planning, the trajectory taken by the organization in the following period.

Creativity and innovation represent, as shown, two of the important elements which ensure development and success of an organization in a more and more complex competitive environment. The capacity of innovation of an organization is determined by the power of personnel creativity, of managerial team competency and the existence of mechanisms to sustain new ideas implementation, such as their transformation into competitive products and services. Developing creative and innovative power of human resources is realised by recruiting, and their adequate training and permanent improvement.

Today, we appreciate that managers and organization entrepreneurs must fulfil a series of actions, from which we remind: conceive and development of dynamic strategies and politics; creating a favourable organizational climate for creativity, thus human resources will have a higher degree of liberty in thinking, expressing and acting; promoting certain flexible organizational structures; building certain groups between compartments and

laboratories for experimenting new ideas; encouraging and supporting human resources to participate to scientific conferences and symposiums, such as fares and expositions; selecting, hiring, motivating and promoting employees with creative spirit; use of methods and techniques of creativity stimulation such as Delphi technique, brainstorming, Delbecq method and so on.

Another action direction recommended for today's organizations has in sight the development of human resources, of which creative-innovative potential is inexhaustible. Human resource produce, accumulate, transfer and disseminate knowledge, which is main source of competitive advantage in today's society. Communitarian states adopted Operation Programmes to establish priority axes and main domains of intervention for human resources, in order to implement financial assistance of European Union through European Social Fund, within Convergence Objective, for programming period 2007-2013.

We appreciate to impose the substantiation and operationalization of new programmes for human resources to target, mainly, on favouring access to education and quality professional formation, promoting entrepreneurial culture, stimulating participation to programmes and continuous formation, supporting organizations and employees in order to grow adaptability to new knowledge-based society challenges and so on. Entrepreneurial – management development programmes, focused on creativity and innovation, show a great importance nowadays. Attending such programmes, entrepreneurs and managers will be aware of the fact that the organizations they manage could become more competitive by a plus of creativity and innovation.

To maintain in operational excellence sphere, organizations must promote evolutionary cultural models, focused on economic results and performance. Such type of evolutionary culture organization is materialized by helping managers to identify change, hence the organization to adapt to the environment and obtain competitive advantages on long term.

Orientation of organizational culture towards economic result and performance is established in tight connection with complex motivation of human resources. Essentially, an evolutionary culture of organization, oriented towards results and economic performance, is based on four main coordinates: accepting necessary changing rhythm; human resources creativity, as a support of change; acting positively towards the organization, in its ensemble, facing change. Management must adopt politics which have as an inspirational source exceptional results of its employees. Developing such a cultural model

supposes that managers and entrepreneurs to respect human resources, to offer them freedom of creation and enough autonomy to excel.

Involvement of partner organization along with universities and research institutes is essential in the context of knowledge-based society and economy. With partnerships, innovative organizations, universities and research institutes have greater chances to win grants and projects and to win funding on national and international forums.

Also, such partnerships create the possibility of accomplishing studies and interdisciplinary research, by participation, for example, of certain universities, institutes, research centres with technical, economical, medical profile and so on. Involvement of private organizations in such projects imprints from the beginning to studies and research a profound applicative dimension.

Dissemination of activity results of scientific research, stipulated in grants and projects programme, is realised by organization of conferences, symposiums and workshops, by editing scientific bulletins, by publishing studies and articles in high impact journals etc.

5. Conclusions

Society and economy based on knowledge presume materialization on a higher level of the knowledge capital, as main component of intellectual capital of a nation. For such a society and economy, knowledge, as a result of knowledge process, is a main source of competitive advantage on national, organizational and individual level.

The creative-innovative potential of an organization is determined by the capacity of creation of its members, such as projecting and implementing strategies and politics to sustain generating, experimenting and applying new idea, respectively transforming them in tangible goods (products and services) or intangible (knowledge). Creativity and innovation allow organizations to anticipate change, to develop new technologies, to create new products, services and operational methods.

Creative-innovative behaviour of human-resources, such as their involvement in organizational changing process must become a way of living. Knowledge-based organization is focused on future, and managers and entrepreneurs have a proactive strategic vision in business approach. Such managers and entrepreneurs' vision is reflected on human resources

behaviour, which must manifest same implication in today's organizational problems, as well as in changing projects.

Organizational changing process implies application of systems, methods, managerial techniques to lead to reaching objectives of new firm's strategic orientations. Management practice aim to accomplish connection between human resources and organizational activities, such as teaching rules and principles to govern the firm's working processes.

Directions of action recommended to nowadays organization, in order to pass to knowledge-based organization stage, must subscribe to the following major coordinates: practice strategic management on wide scale; promoting an organizational climate towards creativity and innovation; operationalization of certain politics and programmes for developing human resources; creating and developing new evolutionary culture models, towards result and economic performance; organizational partnerships implication, along with universities and research institutes.

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THE ROLE OF GOVERNMENT IN ROMANIA'S PARTICIPATION IN DIGITAL ECONOMY

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Abstract

To participate in the digital economy, for a nation, it is imperative the need to adopt ICT, but not only at companies and individuals levels but also on the entire society. The national ICT adoption is significant especially in sustainable economic development of Romania. The degree to which Romania join the digital economy is influenced by measures and policies adopted by the government. The Government should facilitate, motivate and support the adoption of ICT at all three levels: individual, entrepreneurial and governmental. A nation cannot benefit from participation in digital economy when the government vision on the use of modern technology is not sufficiently developed. If Romania wants to be a competitive country, then the main role of Government should be to facilitate and enable development of the digital economy.

Keywords: *digital economy, government, e-readiness, ICT*

JEL classification: *O16, M10, M21, D83*

1. Introduction

The development of Information and communication technology, at global level, motivated many countries to invest in the growth of this sector, primarily as a guarantee of participation in digital economy. Second, the development of ICT at national level, also become an important pawn in:

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increasing competitiveness, sustainable development of countries or regions, minimization of the digital divide, expanding the market for domestic producers, lower inflation, increase access to knowledge and external know-how, increase economic efficiency, education, etc.. Therefore, ICT beneficial affects both country's economy and social environment, allowing us to say that we live in a society based on knowledge.

A nation cannot participate in the digital economy and to take advantage of it, without adopt ICT at individual, business and government level. Digital economy was not created only by increasing the ICT sector but also by the effects appeared after digitalization of the businesses and of the life of individuals. Many changes microeconomic, macroeconomic and social, occurring after the adoption of ICT, make digital economy be an economy of present. One of the most important changes brought by the digital economy is the change of business environment thus affecting SMEs, the main supporter of GDP. Thus, SMEs come to play an important role in research and innovation, becoming an important pawn in the digital economy and a propagator of competitiveness.

Participation in the digital economy has given advantage to those nations who have developed the ability to create, accumulate and disseminate knowledge, connected in a virtual network designed to create and distribute new information. Adoption of ICT has facilitated economic growth based on knowledge, allowing knowledge encoding and digital transmission anywhere in the world. So, in today's economy, an economic system not based on knowledge is not possible (Mutula, 2010). Businesses and individuals access to knowledge (especially external know-how) is essential for sustainable development of a nation, and the government must facilitate the access to ICT.

For a country to be able to join the digital economy, changes must come primarily from governmental level. Government measures for supporting the adoption of ICT and the electronic readiness of the government is an important pawn in defining the level of participation of a nation to the digital economy.

2. Government readiness for ICT

The biggest challenge for Romanian business is to increase his competitiveness on the EU market. Speaking about the competitiveness of Romania, according to „Global Competitiveness Report 2011-2012”,

Romania ranks at number 77 of the 142 countries analyzed, down 10 positions from the 2010-2011 period and by 13 positions from 2009-2010 (the position was not affected by the increasing number of countries analyzed). Analyzing the Global Competitiveness Index in detail (Table 1) we see that ten indicators with negative effects on competitiveness are generated by the government and its actions.

Table 1: The Global Competitiveness Index – government indicators rank

Indicator	Rank / 142
Transparency of government policymaking	140
Quality of overall infrastructure	139
Extent and effect of taxation	135
Efficiency of legal framework in settling disputes	122
Public trust of politicians	119
Favoritism in decisions of government officials	115
Efficiency of legal framework in challenging regulations	113
Gov't procurement of advanced tech products	111
Wastefulness of government spending	107
Burden of government regulation	105

Source: The Global Competitiveness Report 2011–2012 (World Economic Forum, 2011a)

On the first three indicators, considered critical indicators given the position occupied, is the quality of overall infrastructure, very important indicator in the level of Romania's participation in digital economy. Given the importance of ICT, the impossibility to access them is one of the main forms of social and economic exclusion (ITU, 2007). A high level of e-inclusion is always generated by an appropriate e-readiness. An appropriate e-readiness means: knowledge and skills to use ICT, public confidence in using ICT, developed infrastructure, electronic accessibility, electronic government, government measures to support the adoption and use of ICT, companies ready to take advantage of ICT, etc.

In terms of government readiness, meaning the government vision to prioritize ICT in the national agenda and in competitiveness strategy (World Economic Forum, 2011b), according to „The Global Information Technology

Report 2010–2011” Romania is positioned on 119 of 138 countries analyzed. In fact, the main cause of the level of Networked Readiness Index occupied by Romania is the government readiness pillar. Analyzing the indicator which takes into account the „importance of ICT to government vision” (according to this indicator Romania is ranked 115 of 138) we see the main cause of insufficient government measures to support the ICT adoption. This situation is comparable to effects occurring at the company level where the manager does not have a deep understanding of ICT use; if the manager gives an inadequate importance to ICT then the company soon became uncompetitive, because he cannot benefit from the global network of knowledge and will not have enough know-how to develop.

In terms of using ICT at governmental level, even if ICT is present, government efficiency is not influenced by its use. E-government means the use of ICT in public administration, primarily to facilitate rapid access to services and secondly to optimize the functionality of public administration. E-government „transform the way in which interactions take place, services are delivered, knowledge is utilized, policy is developed and implemented, citizens participate in governance, and public administration reform and good governance goals are met”. (UDESA, 2012)

Electronic government, an asset of competitiveness and economic development, is still underdeveloped in Romania. The United Nations Department of Economic and Social Affairs ranks Romania, according to the E-government development index, to rank 62 from 190 countries analyzed (Table 2). This shows once again the government's reduced ability to use and to benefit from the use of ICT.

Table 2: E-government development index value and country rank

Country	E-gov. development index value		Rank / 190 (2012)
	Year 2012	Year 2010	
Korea	0.9283	0.8785	1
Netherlands	0.9125	0.8097	2
United Kingdom	0.8960	0.8147	3
Denmark	0.8889	0.7872	4
United States	0.8687	0.8510	5
Bulgaria	0.6132	0.5590	60

Romania	0.6060	0.5479	62
Moldova	0.5626	0.4611	69

Source: (United Nations, 2012)

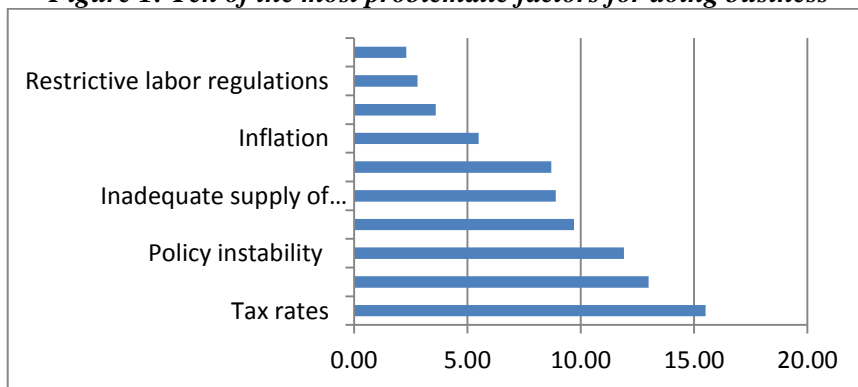
3. Governmental factors affecting the economic environment

In Romania, as well as in most countries of the world, has been adopted proactive policies priority to create a favorable environment for sustainable development of information and communication technologies, but the uptake and implementation of the policy has not achieved the desired level.

Following own analysis undertaken in 2010 on SME from Romania - Development Region Centre, revealed that 10% of businesses surveyed believe "insufficient government support" is an obstacle to ICT adoption. Government can create an environment where e-commerce implementation and adoption of ICT by SMEs, to develop largely at the potential of these investments. Improvement and extension of existing infrastructure, motivating SMEs through tax exemptions, developing the population confidence and increasing the ICT-related knowledge which can be acquired from public education, would help significantly to facilitate the ICT adoption.

In the survey conducted by World Economic Forum, respondents were asked to say the most important five problematic factors in developing business in Romania. Ten of the most problematic factors resulted for doing business, presented in the Global Competitiveness Report, refers to measures and policies undertaken by government (Figure 1).

Figure 1: Ten of the most problematic factors for doing business



Source: (World Economic Forum, 2011a)

Given the previous analysis we conclude that Romanian government environment is not sufficiently prepared for adoption and use of innovative technologies. This has indirectly effect on government policies to support ICT use by enterprises and individuals. Bulgaria has managed to digitize part of public administration, outrunning Romania to this chapter. It is expected that in the next period, also the readiness for ICT of Bulgarian business environment to show an increase, enough to overcome the current position of Romania, becoming an environment much more favorable for investors.

4. Conclusions

The importance of ICT in the economy of a nation is widely recognized and indisputable. Therefore, the main users of ICT, enterprises and individuals, must be supported in their development efforts in research and innovation purposes. When you want a digital economy and digital divide control, government measures are those that have to support society.

In conclusion, the vision of government and government low-impact measures are those that slows the participation of Romania in the global digital economy. Perhaps, there is missing knowledge about digitization at the enterprise level, but the government should guide enterprises to adopt ICT, and not as an incentive to increase GDP but a desire to improve Romania's position globally. E-government should not be viewed, by politicians, as a way of loss of power but as an opportunity to strengthen the confidence of the population and increase government efficiency and transparency.

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MANAGEMENT CHALLENGES - A PREVIEW IN FUTURE OF CAPITALISM -

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Abstract

The economic crisis comes in the context the deepest political crisis faced by the EU today. Economic catastrophe led to the strongest economic crisis since the '30s. Downturns were commonly explained using technical arguments, economic or financial reasons. Because they were discussed by experts in language often inaccessible, so often we face today and dangerous misunderstanding of the population crisis. When talking about economic crises tend to forget that they come in a political context, social and cultural. At the same time, how society reacts to the crisis is decisively influenced by the values it embraces.

Keywords: capitalism, management, cultural patterns, efficiency

JEL classification: D63, H12, P11

1. Introduction

Performance concept is associated with three concepts: economics (purchase necessary resources to low cost), efficiency (maximizing the results obtained from a given quantity of resources or to minimize obtained to achieve expected results), Ristea M. (1997) and efficiency (which saves time, while efficiency is synonymous with saving resources), Niculescu.M (1997)

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the passage of time, capitalists have always taken account of these key elements.

$$\textbf{Performance} = \textbf{economy} + \textbf{efficiency} + \textbf{effectiveness} \quad (1)$$

The performance of a firm or an economy defined by productivity and efficiency, productivity representing the ratio between results and the means employed to achieve results, and effectiveness representing the ratio between results and expected results.

$$\textbf{Performance} = \textbf{productivity} + \textbf{efficiency} \quad (2)$$

Interestingly, and following these elements, the current crisis started with financial turbulence, people have lost money, continued with an economic crisis, in which GDP fell, and generated a social crisis, in which million people lost jobs. The current turmoil is the product of a crisis of Western cultural model, the crisis caused by removal of core values that led to the initial rise of the West.

2. Management models of capitalist economy

The problem is not so simple: the current economic problems of the periphery of the euro area due to inadequate economic policy among others. Southern and Northern Europe are two different economic types. The difference between South and North is immense. South is “another civilization”, another economic model operating in conditions like “exchange your surplus with my surplus”.

In fact, capitalism has proven extremely versatile system, which has folded the civilization and cultural particularities of states. In Europe for example, have coexisted three distinct models of capitalism and another one is of Asian origin:

- a. On the one hand, *Anglo-Saxon model* is characterized by entrepreneurship and private property, the non-interventionist state, regulatory requirements, with a social system, individual responsibility and greater risk tolerance, with funding provided mainly by the stock exchanges;

- b. Another is **continental northern Europe** model developed, which is based on stricter norms regarding economic life, solidarity and stability, with focus on long-term goals, redistribution and important state role in society. The area is particularly characteristic of German and Scandinavian, and has aversion to debt accumulation.
- c. *The southern European countries model* characterized by weak and bureaucratic state, laxity of laws, inadequate infrastructure, high structural deficits and individualism. This was doubled in many cases by a significant black economy or parallel economy.
- d. *Asian model of capitalism* is characteristic in Confucian culture, in which coexist with authoritarian state capitalism. Confucianism values the mutual consent stability, earnest work, discipline, frugality and education. The values of this system are similar to those of early Protestantism.

All these models have reacted differently when they were confronted with the crisis. Crisis in peripheral European economies emphasized the violent protests and partisan spirit of individualism, deficits became unsustainable, and states and society became increasingly worse to the crisis. As a sign of lack of solidarity and social cohesion, a part of the elite has tended to move their accounts abroad to make them safe from any taxation.

The Anglo-Saxon tried to keep the economy afloat accepting substantial budget deficits, putting growth before maintaining macroeconomic balance. Although social protests following the crisis, they were rather restricted and largely non-violent.

Better resisted was the European continental model, where social cohesion has allowed reaching several agreements that they could keep their jobs, the burden is divided between the state and the private sector (as is the case of Germany).

Very interesting was the response to the crisis due 1997-1999. The Confucian culture, that arises from the accumulation of unsustainable deficits, which was financed externally. This development model has a departure from Confucian values. The states from South East Asia have responded with tremendous social solidarity (ie South Korea). This social cohesion allowed them to rebuild their economies and to establish sound fiscal practices, which they obtained the trade surplus to be invested in other countries (especially in the West) to avoid dangerous effects of inflation and local currency appreciation .

3. Some causes that contributed to the failure of the capitalist economy

This financing with cheap money from Asia contributed directly to the current crisis facing Western countries because Western economies for two decades have allowed a significant proportion of the population to immigrate. Also many companies extend more over than possibilities in terms of credit, and led to the accumulation of bubbles.

However, the origin of the present problems of Western capitalist economies are substantive and changes in Western culture and collective mind changes that put into the center to obtain personal satisfaction, immediately and at any cost, even by sacrificing the future. From savings and prudence, it was so in debt and greed, and this was reflected individual greed and corporate environment. The main objectives were financial indicators, that short term profitability, business sustainability is not implemented or their social role. Exclusively on profit-orientation at all costs and increased risk appetite led in some cases fraud.

Looking to cut costs, Western capitalism has implemented out-sourcing and relocation of production to emerging countries. Were obvious advantages for companies, lower costs, increased profits, and shareholders were satisfied.

Export jobs but productive thinned middle class and increased income inequality has polarized society. There was a gap in the way it is perceived economic value of companies and their social role. It is not without significance that it was that a company like Facebook, which has several thousand employees, some of them in emerging countries, to be evaluated between 80 and 100 billion dollars, while companies and producers of goods general Motors, which has 200,000 employees, to be valued at the exchange at about 40 billion dollars.

Neoliberal principles that influenced, including free movement of citizens are put to the test, as some states do not allow free access to the labour market. Dissatisfied voters is tempted to accept anti-immigrant populism.

In 1957, the Treaty of Rome laid the foundations of what was called the European Economic Community, seeking to create a common destiny with a „union ever closer.” But in Europe there are regional and national differences in the way of thinking and acting, which in the past 50 years have not disappeared, but still. French view of the state is different from that of Britain.

The concept of law is different from German to Italian and Romanian. The level of taxes that people are willing to pay is different from Danish or Greek.

All these differences actually show a lack of unity that can explain part of Europe's economic and political failures. European values such as ***freedom, democracy, human rights, rule of law***, are refined and interpreted differently in West and East, as Christopher C. (2009) shown. Europe has experienced unprecedented demographic changes brought about in the age structure of population of mass immigration. Immigrants who have arrived have taken place values as ***tolerance, equality, rule of law***, but their values were imported. Consisting of a multitude of nations with different cultural elements, Europe still has to adhere to common values across its entire population.

A lot of differences between EU Member States are raised by law, diversity and solidarity, which however are not only their own values. Prosperity was present in Western Europe after the Second World War, while its east was present tyranny, which in economic terms has led to a poor allocation of resources and inefficiency, which has resulted in a welfare loss of the entire population.

„Unity in Diversity”, the EU motto, automatically determines and accepts of all differences, which became evident as the deepening crisis strained relations that emerged between its members.

4. Solutions and trends

The middle class has played over time, especially after the Second World War, a fundamental role in the evolution of societies that have embraced liberal capitalism, bonuses allowed for growth of large numbers of people and backbone of the democratic system. Erosion of the middle class in recent decades has brought with it a certain weakening of democratic values and allowed the rise of populism and extremism at the expense of moderation.

Liberal capitalism needs a very active middle class to survive. In Western countries, the crisis can be made and on behalf of its decline. In Eastern Europe, the crisis can be put more on account of absence or fragility of the middle class. Instead, globalization creates the conditions of the middle class rise in Asian countries.

Returning to the original model of capitalism that is ***earnest work, discipline, innovation, savings and accumulation*** could be a chance of saving

the states in crisis. As seen, ***cultural patterns can be changed if social and political will for such a transformation***. This requires leadership and assuming the risks inherent politicians to adopt unpopular measures.

The fact is that long-term sustainable development, reducing inequality and respect for human beings should be part of the priorities of economic, social and cultural needs of the new capitalism in Europe.

The Romanian economy, trade liberalization has allowed foreign companies to destroy local industries in developing practical and free movement of labour is translated only by attracting specialists in developed countries. (Bodea, 2011).

In the early '80s, when concepts that circulate mostly post-industrial society or economy services, imposed new economic theory of „comparative advantages” which argued that the future was in services and high technology as advanced economies such as those of U.S. and EU, have restructured the line moving energy-intensive industries and labour in the north to the south. Relocation of industries, which meant jobs for those willing to work hard for a token pittance, (eg Lohn for the textile industry, and others), but leading to a strong de-industrialization in the north without the development of large losses can offset the jobs and income (reindustrialization process would be desirable, but He was not a serious concern for public authorities).

Relocation to favoured corporations, which have made huge profits, and consumers have benefited from relatively low prices of imported products, but created imbalances and deficits have exacerbated the issue of external debt and pressure on budgets net importing states. (Ridderstrale, Nordstrom, 2007).

Deindustrialization is one of the causes, not one, the structural imbalances that affect the world economy: the East and Southeast Asian produce much and save too much, while developed countries in Europe do not produce enough and spend too much, leading to major imbalances in international trade, which explains in part the financial crisis of 2007-2008 and the EU caused by sovereign debt.

Excessive market fundamentalism, inspired by the ideas of Milton Friedman, has negatively affected the less wealthy and more on the rich and the very rich.

But not only tinting problem interventionism public authorities is important, but also stimulate the excessive consumption through demand-driven policy or brazen consumerism has its relevance, because an influential economist Robert Mundell noticed as well that offer focused policies can

bring more jobs and necessary restructuring of the global economy (green energy, clean industries based on high technology, performance and useful services company).

Another cause of inefficient management solutions successfully applied developed capitalist economies of western Romania is determined by the corruption that is largely due to lack of transparency in economic, social and political.

5. Conclusions

Economy tends to be self-regulated. It is therefore important purpose of self-regulation, and the people are the ones who have to give a good trajectory. This is hard and difficult to achieve if we have a good specialist in charge. The last census shows that Romania's population declined. Unfortunately, many of the best people who once were very "salt of the earth" at home, work or community were emigrated. Romanians were left looking for models, examples, figures able to inspire seriously to work more effectively in our country to cover domestic consumption in order to increase welfare and combat ineffectiveness.

Inefficiency, the fundamental issue, the Romanian economy is causally determined by a non-correlation between domestic production and domestic consumption. In such circumstances, the people decide, rationally that it is better to restrict their consumption, and the little left to put the thing away. And not just because of the crisis, but because memory has learned that history repeats itself, and the shock comes after another and still another (low wages by 25%, followed by increased VAT and so on). And as any living man learns and adapts, and determines to set aside logic, because nobody knows what will invent new tax, or what other problems may arise. And that assumes rationality and careful use of available resources.

Decision to apply a management model suitable for Romanian economy is to lead to effective use of resources which must meet several requirements, including:

- a. ***being a professional, scientifically***, and adapt to present the economic, social and political, in accordance with appropriate scientific tools that remove empiricism, improvisation, routines, voluntarism;

- b. ***to be empowered***, in that it must be adopted by the governing body whose task is stated explicitly, and the decision maker must have the skills, knowledge and skills that decision, both at macro and wide micro;
- c. ***to be clear, concise and non-contradictory, to arise from coherent policies and strategies*** and in formulating the course of action, to state briefly, but comprehensively all the necessary operational, so do not give rise to ambiguous interpretations, on objective means of implementation, implementation dates and responsible with implementing the decision;
- d. ***to be appropriate, optimal***, to fit between development and operationalization. This requirement is based on the idea that it is preferable to a good decision, taken in the range according to a very good decision, taken late. Compliance is increasingly necessary measure to accelerate the pace of change and increasing complexity of business decision problems.

Increased efficiency at the macroeconomic level and microeconomic level also can be achieved by reforming the national economy, the cultural pattern, which should start with the management science applied to the Romanian economy, monetary policy focused on combating inflation ignored financial market fragility and monetarists not have envisioned the failure of financial markets can cause much larger population than inflation. Return to the ideas of Keynes, reconsidering the role of fiscal policy and industrial policy, sustainable development and profound restructuring of real and nominal economy can be a recipe for management more effective and more humane capitalism, because capitalism which the prosperity of most population is not a true democracy, but anachronistic perpetuation of oligarchic system that has nothing to do with meritocracy and equal opportunities, principles which have ensured the success of American capitalism origin. (Roubini, Mihm, 2010).

Lack of Romanian economy leads us to say ***that the state can not multiply wealth by dividing it. What one person receives without working for it, must be produced by someone, and then the manufacturer will not get anything that worked. State can not give someone something without being taken before anyone else.*** When half the population sees that he can not work because the other half will take care of it and the half who worked out that no longer work so that others are beneficiaries of their work, then surely it is end of any nation.

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STUDY REGARDING THE ATTITUDES TOWARD CORPORATE SOCIAL RESPONSIBILITY OF THE WORLD'S TOP TRANSNATIONAL CORPORATIONS

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Abstract

Transnational corporations (TNCs) are the leading actors of the global economic scene; so their strategic behaviors tend to be followed by their challengers – in search for global competitiveness. Therefore (and in spite of some well known blunders and slippages), Corporate Social Responsibility (CSR) may have the vocation to become a generalized dimension of the corporate strategy – as well as an answer to some of the very thorny problems facing the humankind. The aim of the paper is to analyze the attitudes toward CSR of the world's top TNCs, in order to see if there is a pattern regarding their strategies.

Keywords: *transnational corporations, corporate social responsibility, strategic approach*

JEL classification: *F23, M14*

1. Introduction

Transnational / multinational corporations / enterprises (TNCs / MNEs) are, without any doubt now, the *engine that fuels the globalization process*; as any other engine, beside the *positive results/effects* they generate – such as moving forward of the global system, development and progress, they also risk to generate pollution, social disasters and *a whole plethora of other side effects*. Given their (sometimes) global, significant, diverse and long term

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impacts, very visible and susceptible to cause rejection (and sometimes even sabotages) from stakeholders, TNCs began to recognize the need of reconciliation with all the stakeholders – internal and external, primary and secondary. The literature, as well as all the international / global institutions and organizations have generated, captured and promoted a behavioral change concerning this issue.

2. Theoretical background and Literature review

According to Dunning and Lundan (2008) “*a multinational or transnational enterprise* is an enterprise that engages in foreign direct investment (FDI) and owns or, in some way, controls value-added activities in more than one country. This is the threshold definition of a multinational enterprise (MNE), and one that is widely accepted in academic and business circles, by data-collecting agencies such as the Organization for Economic Co-operation and Development (OECD), UNCTAD’s Division on Investment, Technology and Enterprise Development (DITE), and by most national governments and supranational entities” (Dunning & Lundan 2008).

For the unified and comprehensive approach of its Transnational Corporations Statistics, UNCTAD starts this (website) section by defining TNC as follows: “*A transnational corporation (TNC) is generally regarded as an enterprise comprising entities in more than one country which operate under a system of decision-making that permits coherent policies and a common strategy. The entities are so linked, by ownership or otherwise, that one or more of them may be able to exercise a significant influence over the others and, in particular, to share knowledge, resources and responsibilities with the others*” (<http://unctad.org/en/Pages/DIAE/Transnational-Corporations-Statistics.aspx>).

On the other hand, the *corporate social responsibility* (CSR) construct describes the relationships between business and the larger society: “*from the point of view of the firm, its CSR is the set of moral duties towards other social actors and towards society that the firm assumes as a result of its economic, social, political, and, of course, ethical reflection on its role in society and on its relationships with those other actors. And with regard to external observers, it is the set of moral duties that the other agents and society attribute to the firm as a consequence of the role it assumes and its relationships with those actors. In practice, then, CSR will be the result of a*

dialog between the firm and its stakeholders about the obligations of the first and the expectations of the second” (Argandona & von Weltzien Hoivik, 2009).

According to this kind of definition, Freeman and McVea promote **A Stakeholder Approach to Strategic Management**: “The idea of stakeholders, or stakeholder management, or *a stakeholder approach to strategic management*, suggests that managers must formulate and implement processes which satisfy all and only those groups who have a stake in the business. The central task in this process is to manage and integrate the relationships and interests of shareholders, employees, customers, suppliers, communities and other groups in a way that ensures the long-term success of the firm. A stakeholder approach emphasizes *active* management of the business environment, relationships and the promotion of shared interests” (Hitt, Greeman, Harrison, 2006).

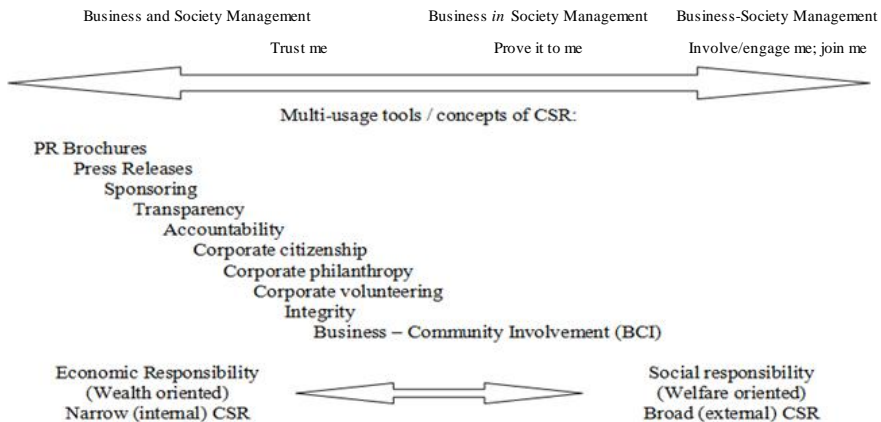
Why the pressure? Because “Sustainable development calls for people and organizations to meet their present needs in such a way that does not hinder future generations’ ability to do the same. Many TNCs are creating voluntary environmental programs to manage more effectively the environmental impacts of their plants, facilities, and operations.” (Rondinelli, 2007)

How to do this? ”In his speech at the Johannesburg World Summit for Sustainable Development (WSSD) in 2002, the UN Secretary General *Kofi Annan* expressed the *challenge of corporate responsibility* in the following way: “*I hope corporations understand that the world is not asking them to do something different from their normal business; rather it is asking them to do their normal business differently.*” (Wilenius, 2005)

The academic literature in the field of TNCs’ approaches and attitudes toward CSR is very generous – especially in the last decades. In their book called *International Business – Society Management. Linking corporate responsibility and globalization*, the authors summarize the steps that corporations have taken within their CSR approaches – see **Table 1** (Tulder and Zwart, 2006).

Table 1: Four CSR approaches

Inactive	Reactive	Active	Pro-interactive
Corporate <i>self</i> responsibility	Corporate social <i>responsiveness</i>	Corporate social <i>responsibility</i>	Corporate <i>societal</i> responsibility
Inside-in	Outside-in	Inside-out	In/outside-in/out
Doing things right	Don't do things wrong	Doing the right things	Doing the right things right
Doing well	Doing well and doing good	Doing good	Doing well by doing good
Just do it	Just don't do it	Do it just	Just do it just
Efficiency		Equity/Ethics	Effectiveness
Utilitarian motive: profit maximization	Negative duty approach: quarterly profits and market capitalization	Positive duty or virtue based: values (long-term profitability)	Interactive duty approach: medium-term profitability and sustainability
Indifference	Compliance	Integrity	Discourse ethics



Source: Tulder and Zwart, 2006

In 1997 John Elkington has propose – into his reference work *Cannibals with Forks: the Triple Bottom Line of 21st Century Business* – the concept and practice of the necessary **triple bottom line** – able to integrate within a coherent corporate strategy **Profit – People – Planet** (Elkington, 1997). Tulder and Zwart have enriched – through their book from 2006 – the CSR approach with the **triple E principle of doing business: Efficiency – Effectiveness – Equity/Ethics** (Tulder and Zwart, 2006). An apparent oxymoron seems to be the solution that everyone was looking for since decades, and the evolutionary process presented by the two authors on their charts make this approach not only logical and natural, but also profitable and desirable for the long term survival of corporations.

3. The world's top 10 non-financial TNCs and their approach regarding CSR

In order to analyze the attitudes and behaviors of the world's top transnational corporations (TNCs) toward corporate social responsibility (CSR) we undertook the following:

- a. We have extracted *top ten non-financial TNCs in terms of transnationality index (TNI)* from the UNCTAD's top 100 (reference year being 2010 – the most recent analysis available). The “*Transnationality Index is calculated as the average of the following three ratios: foreign assets to total assets, foreign sales to total sales and foreign employment to total employment.*” (UNCTAD, 2011). We have selected the top 10 TNCs in terms of TNI as percent and not in terms of TNI by assets (as most of the studies use) because we assume that the TNCs approaches are rather based on the industry they operate in and by unique strategic choices between universalism and relativism they make, rather than by their assets. The results are presented in Table 2.

Table 2: The world's top 10 non-financial TNCs, ranked by TNI, 2010
(Millions of dollars and number of employees)

TNI rank	TNC	Home economy	Industry	Assets		Sales		Employment		TNI %
				Foreign	Total	Foreign	Total	Foreign	Total	
1	Nestlé SA	Switzerland	Food, beverages and tobacco	113 574	118 818	103 154	105 209	271 605	281 000	96,8
2	Anglo American plc	United Kingdom	Mining & quarrying	62 238	66 656	25 772	27 960	92 000	100 000	92,5
3	Anheuser-Busch InBev NV	Belgium	Food, beverages and tobacco	108 440	114 342	32 193	36 297	104 126	114 313	91,5
4	Pernod-Ricard SA	France	Food, beverages and tobacco	31 070	33 264	8 821	9 821	15 796	18 453	89,6
5	Nokia OYJ	Finland	Electrical & electronic equipment	44 140	52 276	55 728	56 220	112 586	132 427	89,5
6	Linde AG	Germany	Chemicals	32 731	35 927	15 432	17 044	41 262	48 430	88,9
7	WPP PLC	United Kingdom	Business services	33 074	38 111	12 737	14 417	91 767	101 387	88,5
8	Xstrata PLC	Switzerland	Mining & quarrying	66 430	69 709	22 902	30 499	36 436	38 561	88,3
9	Unilever PLC	Netherlands/United Kingdom	Diversified	49 637	55 007	54 003	58 625	136 000	165 000	88,3
10	Schneider Electric SA	France	Electricity, gas and water	36 876	41 490	23 580	25 934	102 490	123 482	87,6

Source: UNCTAD

(http://unctad.org/Sections/dite_dir/docs/WIR11_web%20tab%2029.pdf)

- b. We have analyzed the general *approach toward CSR of the top ten TNCs from their websites*: on one hand we took into consideration the content of the special dedicated CSR / sustainability button and, on the other hand, we analyzed the corporations' report regarding CSR – as voluntary reporting and emphasizing of the corporations' CSR strengths. The summarized results are as follows:

Nestlé SA (<http://www.nestle.com/Pages/Nestle.aspx>) – the corporation with the highest transnationality index (TNI), has developed its CSR approach under the *Creating Shared Value* commandment. It states within its Creating Shared Value 2011 Report *Meeting the global water challenge*: “It is our firm belief that, for a company to be successful over time and create value for its shareholders, it must also create value for society. We call this *Creating Shared Value* (CSV). Based on strong foundations of compliance and sustainable business practices, this is our basic way of doing business. We have identified *the most fertile opportunities for Creating Shared Value*, in areas that are core to our business activities and vital for our value chain. These are *nutrition, water and rural development*. (...) *Why Nutrition?* Because food and nutrition are the basis of health and of our business as the leading Nutrition, Health and Wellness company. *Why Water?* Because the ongoing quality and availability of this resource is critical to life, the production of food and to our operations. *Why Rural Development?* Because the overall well-being of farmers, rural communities, small entrepreneurs and suppliers is intrinsic to the long-term success of our business. (...) Engaging with our stakeholders underpins Creating Shared Value (CSV), enabling us to identify emerging issues, shape our responses and continue to drive performance improvements.”

Anglo American plc (<http://www.angloamerican.com/>) – the second best placed corporation in terms of TNI has grouped its CSR concerns around the concept and practice of *Sustainable Development*, because: “Sustainable development touches on every aspect of our business, from the moment we identify a possible exploration site all the way to a mine's eventual closure. We believe that *maximizing shareholder value over the long term is best achieved through an intelligent regard for all our stakeholders, and by acting with integrity and responsibility*.” As a result of this kind of approach, the CSR strategy developed by the corporation aims the sustainable development, which “is *embedded in our policies, strategies and everyday practices*. We assess the economic, social and environmental risks and benefits of every

decision. We also work in partnership with our stakeholders to promote sustainable development. *Our goal is to maximise our positive contributions, alongside governments and society, and reduce any negative impacts.*" (<http://www.angloamerican.com/about/approach/development>). That is why the most recent Sustainable Development Report 2011 *What it takes: Partnership and Innovation* emphasizes on sustainability as the ultimate validation unit for the corporate strategy of Anglo American plc: "We strive to place sustainability at the heart of decision-making across all our operations and every aspect of our business."

Anheuser-Busch InBev NV (<http://www.ab-inbev.com/>) – the corporation placed on the third place of TNI Top 3 talks about *Global Citizenship* when referring to its Social Responsibility dimension. In accordance with this self assumed status, the most recent Global Citizenship Report 2010 argues from its very beginning: "At AB InBev, we strive to be *the Best Beer Company in a Better World*. But we cannot achieve this goal in a vacuum. We must work hand in hand with many people, the most important being our employees. Their talents and dedication are the foundation of all we do – from brewing our high-quality beers and promoting their responsible enjoyment, to conserving and protecting our natural resources, to supporting the communities in which we operate. Beyond our organization, we also must form partnerships – essential collaborations that enable us to reach higher and wider to create a better world. These partnerships include community groups, NGOs, government agencies, and industry peers, as well as academic institutions and experts who help us in this journey. As a result, *we have achieved great progress in helping create a healthier environment, vital communities and a safe workplace where our employees can thrive.*" In order to accomplish its aim, Anheuser-Busch InBev NV defines the Better World focus areas: "*Responsible Drinking* - providing quality products, marketing them responsibly, and helping to address the problems of irresponsible drinking, including drunk driving and underage drinking; *Environment* – conserving water and energy; reducing our greenhouse gas emissions, by-products and waste; and helping our supply chain be more efficient; *Community* – providing jobs and competitive wages, paying taxes to local and national governments, making capital investments in our facilities, and giving back through donations and volunteerism to the communities where we operate; *Our People* – promoting learning and talent development, providing a

safe work environment, and helping to ensure that our business is conducted with integrity fuel our social responsibility work.”

Pernod-Ricard SA (<http://www.pernod-ricard.com/>) – according to the corporation’s front page statements, “*corporate responsibility means reconciling economic development with social justice and the protection of the environment*, all as part of a programme of *continuous improvement*. (...) In practical terms, Pernod Ricard’s ideal of corporate responsibility translates into *real commitments with respect to: shareholders* – for whom the Group is committed to offering an attractive investment; *employees* – with whom Pernod Ricard strives to develop a relationship of trust; *consumers* – Pernod Ricard encourages the general public, particularly young adults, to drink in moderation; *the environment* – Pernod Ricard is committed to the natural environment and biodiversity.” As the corporation’s CEO has argued within the *2011 Pernod Ricard Communication on Progress*, in 2010 “the Group decided to create the *Pernod Ricard CSR platform* to focus on its CSR strategy and be even more effective in its respect of each of the 10 principles of the Global Compact. The CSR platform is aligned with the *3 values of our company: entrepreneurial spirit, mutual trust and sense of ethics*. It represents the *five CSR priorities of Pernod Ricard: respect our stakeholders, responsible drinking, environment, entrepreneurship and share our culture*.”

Nokia OYJ (<http://www.nokia.com/global/about-nokia>) – as regards *sustainability*, the strategy toward it is integrated at all the levels of decisions and actions: “*responsible environmental and social practices are integrated into everything we do*. From the devices we build and the suppliers we choose, to our mobile solutions that enhance people’s education, livelihoods and health.” So, in accordance with this declarative statement, the 2010 Nokia Sustainability Report states that: “*Sustainability is an integral part of our business strategy*. We take a *systematic approach* to identifying the opportunities and risks sustainability presents, and we *aim to* minimize the negative impact of our operations and maximize the positive impact. (...) the *three areas* which help deliver our goal of *connecting everyone to sustainable development*: our products and services, our people and our operations. Our targets are supported by global principles and standards and go way beyond compliance.”

Linde AG (<http://www.the-linde-group.com/en/index.html>) – the corporation defines itself as “a world leading gases and engineering company. *The strategy of The Linde Group is geared towards sustainable earnings-*

based growth and focuses on the expansion of its international business with forward-looking products and services". In accordance with this assumption, the corporate responsibility strategy of the corporation states that: "*We act responsibly towards our shareholders, business partners, employees, society and the environment – in every one of our business areas, regions and locations across the globe. Our corporate responsibility strategy anchors our high standards into our day-to-day business.*"

WPP PLC (<http://www.wpp.com/wpp/>) – the role and contribution of corporate responsibility is stated at this corporation as follows: "*we believe that behaving responsibly towards people and the environment helps us achieve our business goals and maintain strong relationships with clients, our people, regulators, suppliers and investors.*" Under these circumstances, the relationship between corporate responsibility and the business strategy is defined as follows: "*Our CR activity enables us to take advantage of new opportunities and to manage social and environmental risks connected to our strategy. It supports our business goals directly in a number of areas, including: generating new business opportunities, attracting and retaining the best people, reputation risk management, meeting investor and client expectations, improving efficiency.*"

Xstrata PLC (<http://www.xstrata.com/>) – on the first page of its website, the corporation proclaims: "*Sustainability is at the heart of what we do*"; then, it continues, through the introductory message of the CEO regarding sustainability: "*Our mission statement makes clear that creating sustainable value for our stakeholders is as much our objective as delivering industry-leading returns to our shareholders* - in fact, the two are intrinsically linked and interdependent. Without creating benefits for society, our business will not prosper over the long term and without successful businesses, societies equally cannot flourish."

Unilever PLC (<http://www.unilever.com/>) – the general statement regarding sustainability argues that: "*Sustainability is critical to the continued success of our business and to the environment and society we live in. (...So, ...) through our business and brands, we want to create a better future every day for people all around the world: the people who work for us, those we do business with, the billions of people who use our products, and future generations whose quality of life depends on the way we protect the environment today*". The corporation has also a special website exclusively

dedicated to sustainability: Unilever sustainable living plan: Small actions, Big difference.

Schneider Electric SA (<http://www.schneider-electric.com/>) – the sustainable related chapter of the corporation enrolls under the following statement: “*Energetic and environmental responsibility* lies at the core of Schneider Electric culture and strategy. *Sustainable development is a real and essential opportunity for mobilisation, growth, and differentiation.*” The most recent *Strategy and sustainable development report 2010-2011* confirms and strengthens this approach, through the CEO’s words : “Sustainable development is a conviction, a commitment at all levels of the company and in all its dimensions, from an ethical, social, environmental, or corporate perspective. This is also an important growth driver for Schneider Electric which has decided since long ago to pursue a proactive, innovative, and concrete policy, whose efficiency is measured regularly.”

4. Conclusions

Referring to the analyzed TNCs – the world’s top ten transnational corporations in terms of transnational index value (percent), we must emphasize some *general features of their attitudes toward corporate social responsibility*:

- each one of the TNCs (at least) declares about itself that is very concerned regarding this dimension of its existence – even if the corporation defines it in terms of *sustainability, sustainable development or corporate social responsibility*; this is a very well emphasized and promoted issue also on the corporations websites, with (almost) no exception, no matter if the TNC’s (general) approach is a relativist or an universalist one;
- in most of the cases, the kind of attitude that TNCs have toward CSR is part of an integrative and holistic approach of the corporate strategy – generally, TNCs argue that the whole corporate strategy is developed by taking into consideration the CSR commandments, defined and assumed as core business principles;
- the TNCs are, in general, very preoccupied about the specific kind of possible damage they risk to be accused of – because of the industry they represent and the specific activities they develop – and direct their CSR concerns and strategies toward those specific issues (the corporations from

the Mining & quarrying industry: to the environmental problems; the Food, beverages and tobacco representatives: to responsible drinking, etc.);

- the pressures of the global concerns and problems on one hand, as well as those related to the global competition and the continuous refining of the competitive strategies, on the other hand, had determined an evolution in the way corporations relate to CSR; in most of the cases, the CSR strategy is no longer a differentiation one, but it has become a basic one – essential for the very survival of the corporation;
- the declarative dimension of the CSR strategy – its reporting part – is also very important for these corporations, so the TNCs strive to develop annual CSR reports in accordance with globally recognized standards; they are then categorized, ranked and awarded by international organizations or media groups based on those reports and on the feedback given by different stakeholders;
- inevitably, discrepancies sometimes occur between the TNCs declarations and their actual (re)actions regarding CSR (when corporations try to exclusively benefit from a favourable situation by neglecting any other concern than profit); this kind of behaviour always raises question marks about the corporation's honesty and business ethics and they sometimes generate expensive lawsuits and/or aggressive rejection reactions from consumers.

In conclusion, given the above mentioned circumstances, we believe that *transnational corporations simply cannot give up to the responsible side of their business* (regarding all of their internal and external, as well as primary and secondary stakeholders). This is not just a trendy attitude, but more and more an instrument in order to validate a TNC on long term basis – through its corporate strategy aimed to sustainably satisfy all the stakeholders' interests, in order to successfully survive within the global hyper competitive and challenging environment. This kind of strategic behavior will also be a good example and motivator factor for the challengers of the TNCs and a proper answer to some of the very thorny problems facing the humankind – nowadays and as well in the foreseeable future.

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STRATEGIC ROLE OF ACTIVITY IN THE EFFECTIVE MANAGEMENT OF A COMPANY FROM THE SME SECTOR IN THE ERA OF GLOBAL CRISIS

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Abstract

The year 2009 ended in Poland and other EU countries under the sign of the Great Depression, which began on the other side of the ocean but it covered almost the whole world. The most vulnerable to the crisis turned out to be companies from the SME sector which, in the European Union SMEs represent 99.8% companies operating within the Union, and their sales account for about 56.2% total revenues. EU small and medium-sized companies employ more than 66% workforce and they are the ones most heavily affected by the crisis. In Poland the company from the SME sector accounts for over 90% of all businesses operating in our country. And they were faced in front of the huge challenge which was how to survive during the crisis. One of the effective tools of business management has become a strategic activity. This article presents a strategic activity as the way to survive in times of crisis and egress from having a much stronger position in the market.

Key words: SME, enterprises management, strategic activity, global crisis, strategy management

JEL classification: D6, L10, H12

1. Introduction

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A market economy is mainly characterized by the dominance of private ownership and significant involvement in manufacturing and services, mainly provided to small and medium-sized enterprises, known as SMEs. They are essential in a market economy, since it is they, not the big companies, decide on the economic strength of highly developed countries. Their advantage is that very effectively invented and come into market niches, they can also quickly adapt to customer needs and requirements. They, however, proved to be most vulnerable to the global crisis that was felt most strongly in 2008. Their main objective was to survive in the market. To achieve this, some companies were forced to release some people from their crew, other froze their money, and others cut their profitability thresholds. Many companies, in turn, has set a strategic activity, which skillfully used was strongly influenced by the crisis and the continuation of the company.

2. SME – Basic concepts and definitions

There is no unique definition of small and medium-sized enterprises. The definition differs from country to country, depending on the purpose of its usage, the economic development level and the application of different criteria regarding employment and investment capital. However, the most common definitional basis used is employment. The enterprises differ in their levels of capitalization, sales and employment. Accordingly, the definitions employing the measures of size (number of employees, turnover, profitability, net worth, tec.) when applied at a single sector may provoke the classification of all its enterprises as small, while the same definitions when applied to another sector result in a different way. (Kozetinac, Vukovic, Kostic, 2010)

Table 1: Alternative Definitions of SMEs

	Definition
OECD	Micro – firm with 1-4 employees
	Very small – firm with 5-19 employees
	Small – firms with 20-99 employees
	Medium – firms with 100-500 employees

USAID in the 1990s	Firms with less than 50 employees
UNIDO's Definition for Developing Countries	<p>Large – firm with 100+ workers</p> <p>Medium – firms with 20-99 workers</p> <p>Small – firms with 5-19 workers</p> <p>Micro – firms with < 5 workers</p>
UNIDO's Definitions for Industrialized Countries	<p>Large – firms with 500+ workers</p> <p>Medium – firms with 100-499 workers</p> <p>Small – firms with <99 workers</p>

Source: Author's elaboration based on Quartey P., *Regulation, Competition and Small and Medium Enterprises in Developing Countries*.

Using the concept of small and medium enterprises, generally takes into account companies that:

- have relatively little capital and employ a small number of employees;
- have a small market share, and often the owner is the manager (or group of persons), which eliminates complex administrative and bureaucratic structures;
- are financially and legally independent from the other operators. (Piasecki, 2007)

Given the ambiguity of these characteristics describe the size of the enterprise, in practice, most quantitative criteria are used, ie the average number of employees, the average size of income and the value of fixed assets. As defined by the EU, enterprises:

A small company is the operator, in which:

- employs fewer than 50 employees;
- annual net revenue from the sale of goods, products and services and financial transactions may not exceed the equivalent in PLN 7

million or total assets of its balance sheet at the end of the previous financial year should not exceed 5 million Euros;

- the independence of the company can be extracted. (Czech-Rogosz, Pietrucha, Żelazny, 2009)

Medium-sized enterprise is a company, in which:

- are employed on average less than 250 employees'
- annual net revenue from the sale of goods, products and services and financial transactions may not exceed 40 million or total assets of its balance sheet at the end of the previous financial year should not exceed 27 million Euros;
- the independence of the company can be extracted;

The condition of this classification is to meet all the criteria together.

3. SME's strategic activity and its agents

In many studies, business strategies, the majority declares usually have explicit strategic objectives.

However, a clear set of strategic objectives is not sufficient to conclude that the company is active strategically. According to the authors for the same purpose should be offensive in nature, as well as the necessary processes are achieving these objectives ranging from the preparation of policy options, their selection, implementation and possible correction, or a whole string of strategic management. (Samuelson, Nordhaus, 2006)

Note that the process of developing strategies in the SME sector is considered in the literature to be lame. This also confirm the conclusions of the research strategies of enterprises with foreign participation in Poland. A large part of the answer to the question of opportunities perceived by the company over the next three years related to the strengths of the company (19 indications, which represents 31% of responses), the similar situation occurred in the responses to the question of risk, where the firms surveyed formed weaknesses (6 indications ie 10% of responses).(Strużyna, Orman, 2000)

Among the key issue affecting SME strategic activity include:

Legal system: tax reporting, customs - the simplification of tax reporting and the changing tax laws should be made in order to reduce the differences in the construction of the balance sheet profit (determined for accounting purposes) on the one hand and the other tax revenue and standardize the approach to this problem in both tax laws and Accounting Act.

It is also important introduction to the Civil Code, lease or amendment of a law on public procurement in order to reduce the amount of security brought by a trader, joining the tender and take action to allow easier access to external financing sources. (Dankova, 2003; Strużyna, Orman 2000)

This will improve the competitiveness of SMEs and facilitate the legislation will allow businesses to use the time for education and discussion related to the strategic development of their own business. A factor was the most frequently mentioned among the main obstacles to the activities of the enterprises with foreign participation. The variability of regulation indicated 55% of respondents, and the complicated and inconsistent regulations, particularly tax and customs indicated 52% of the companies surveyed. (Kołodziej 2001)

Quality certificates, certificates - Polish SMEs must be aware of the need for certification or approval. These factors demonstrating their strategic activities and giving the opportunity to enhance their competitiveness and to provide services at a high level. Lack of approval, certificate, certificates, authentication, authorization (eg ISO certification in Poland, has only 1,700 SMEs) constitutes a threat both to SMEs, hoping to expand into EU markets, as well as the integration of skeptical because on the domestic market will also be new competition from EU countries. (Matuszak, 2002)

Trust in suppliers or contractors - Reduced confidence in the partners with whom the company cooperates directly results in the construction of corporate networks is becoming very difficult. This is a worrying phenomenon because in Poland there is significant potential to create groups and companies networks. Joint activities in the trade network of small and medium-sized enterprises may be helpful in overcoming such problems as:

- lack of physical ability, which is often characterized by limited capacity, inadequate or too little storage space and a poor distribution network;

- lack of suitably skilled workforce, this may be the result of a slowdown in development even though the current favorable market conditions. The cooperative network is possible through the precise definition of common objectives included in its business, sharing possessed facilities and related costs;

- low availability and high cost of obtaining financing. (Kozuch, Plawgo, 2003)

Reducing the level of trust between the participants in the exchange is also of the great importance for use by SME operating a niche market strategy, limiting the possibility of its use.

Managerial skills of entrepreneurs - a significant impact on the activity of strategic are management skills. In the small business range of possible reactions and behavior is defined personal abilities, knowledge and motivated by one or two key people. In the growth of companies developing the capacity, knowledge and values of groups. These skills are determined by two factors:

- a power - range of capabilities that control can contribute to the strategic behavior of firms,
- capacity - means the volume of a strategic effort that the head can bear.

High levels of these factors is characterized by business activity were shown to be strategic. (Kalinowski, 2010)

Management style, organizational culture - An entrepreneur plays a key role in shaping the organizational culture of SMEs. This is due to the specificity of the management of small and medium business, which consists contact between staff and the manager, or easier to identify opportunities for workers with the objectives of the company (Targalski, 2008). This is particularly important in the process of increasing labor productivity, as this level is far lower than in EU countries. This is shown previously discussed the results of surveys of enterprises with foreign capital (Lichniak, 2009). Low employee productivity, or lack of work ethos in Polish conditions indicated 24% of respondents. Yet the lack of trust staff determines the management style also translates into the company's image in the environment, hinder the introduction of modern methods of management and organization of work. (Lichniak, 2009)

Communication infrastructure, technical and information - Communication infrastructure, and technical information in Poland is less developed than in the EU, highlights what the fifth, the test company with foreign participation in Poland. This factor contributes to the increase in logistics costs, and thus reduces the competitiveness of Polish SMEs in the European Union markets.

These factors do not exhaust the set of conditions that affect the strategic activity of SMEs. However, are considered by the authors as the most important from the perspective of strategic behavior. (Kalinowski, 2010)

4. SMEs in global crisis

In the context of current economic situation it is import and to stress that SMEs are generally more vulnerable in time of crisis for many reasons among which are:

- It is more difficult for them to downsize as they are already small;
- they are individually less diversified in their economic activities
- they have a weaker financial structure
- they have a lower or no credit rating
- they are heavily dependent on credit
- they have fewer financing options. (Trvdon, Bematik, 2010)

In Poland SMEs have several advantages which are particularly precious during a crisis and fall in demand. These companies are not involved in risky financial operations; they do not try to access unknown market segments. This conservative approach is often under fire of criticism during economic expansion but when crisis loomed it showed that SMEs avoided mistakes which led bigger companies into troubles thanks to that. Micro-enterprises are also very flexible. They can increase and decrease the scale of their operation to reasonable extent relatively quickly. Moreover, since Polish SMEs are particularly active in service and trade, so they depend on the domestic demand rather than exports. Small businesses in Poland operate in relatively safe market niches. However, despite these advantages SME sector has not been totally able to avoid troubles related to crisis. One in four companies reports problems due to downturn and among their biggest “headache” in the difficult times they list:

- too high taxes,
- administrative burdens;
- lack of institutional aid;
- credit crunch. (Grabara, Skowron-Grabowska, Hanic, Dejan, 2010)

Small companies which co-operate with bigger ones are often heavily dependent on their big clients, usually one and only. On the other hand – 42% of Polish SME's have not noticed so far the impact of the crisis on their economic conditions and 7% of them even report increase in turnover. In a case like that the affected companies cannot count on a significant support from the state or state institutions. They have to rely on themselves and their own abilities to survive.

5. Strategic activity in the enterprises from SME sector during the crisis

Company X is a small horticultural business, which has its seat in Czystochowa. This is a small company, ideally suited to the SME sector - is permanently employed 11 people (not counting the owner who is also general manager of the company) and its annual net income does not exceed the sum of 7 million polish zloty. The company has been on the market for over 20 years. It started before 1989 when all activity and entrepreneurship has not been welcomed by the government. Years of the 90th brought an action against the company to consolidate its position in the local market and now it has more than one third of public procurement which gives it a significant advantage over other companies in the same industry.

Year 2009 for Company X, as for many companies in the SME sector, was a year of great economic recovery, as compared with previous years the volume of orders has doubled which resulted in a significant increase in turnover. To meet all the orders the company hired another 5 people on temporary work conditions. Unfortunately, in 2010, the company recorded a significant drop in orders, which was precisely the cause of the crisis which struck hardest in all - ranging from finance to the town until after the wallets of its inhabitants. The city wants to reduce its expenditure has been forced to reduce the number of submitted orders for lawn maintenance and landscaping which strongly affected the company's financial condition. In order to survive the raging crisis and emerge from it on their own, business manager took many steps for doing so:

- first of all, called a meeting of all employees and then clearly presented a situation in which they are undertaking. He explained why the company has not renewed contracts with temporary workers and the company's finances look like. Then called for patience and understanding for the next steps taken by him, as a result of which was to be the company's safe exit from the crisis.

- Manager's next step was to cut costs - slowed down the book and, instead, the company began to use the services of external accounting office, which resulted in lower maintenance costs per employee. Another two people were sent for outstanding leave and offered them to move to half-time.

- Were frozen any increases, bonuses and allowances. In addition, the company refrained from any purchases and investments.

- While the company launched the advertising campaign depicting her as a company that is best able to take care of green areas and lawns. This campaign was designed to maximize the acquisition of new customers. As the order book is significantly lower, the company was forced to turn to private customers. To this end, participated in the Agricultural Fair Gardenia, in Piotrkow's Agricultural Fair and Exhibition of Horticultural Your Garden in Bielsko-Biala.

All these steps, both big and small have produced tangible results - the company has survived the crisis and the year 2011 began with a significant portfolio of contracts, both public and private.

6. Conclusion

Each company is active strategically in some way, one more and the other less. Begin a business is a strategic activity, since taking the challenge of running a company alone is just one manifestation of a strategic activity. Do not assume companies without having any purpose. For some, the aim will be to stay in the market and for the second extension and expansion activities. The objectives pursued by the companies in the SME sector may not be as far reaching as the goals pursued by the great concerns and as they do not have faculty involved in strategic management, but even to a certain extent must be an active strategy. Even if they are not the business end so aware. A good example of the activity of strategic companies in the SME sector was precisely the time of crisis in which they found themselves in 2009-2010. This crisis has affected almost all industries and businesses wishing to stay on the market were forcing to take certain actions, whose aim was just to survive. These activities included, among others, the reduction of employment, suspend all investments, freezing of capital. Some activities may have an entirely different nature - like investments, according to the saying "buy cheap," but that opportunity is reserved only for companies with a significant excess cash. All of the above actions can be classified as a strategic activity, due to the time of crisis, but some increased activity, however, always present in a powerful enterprise.

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REFLEXIONS ON THE ROMANIAN HIGHER EDUCATION AND GRADUATE EMPLOYMENT

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Abstract

The objective of the paper is to provide an insight on the Romanian higher education and to analyse the graduate employment in Romania during the 2006-2010 period. The conclusions reveal that the Romanian graduate employment registered a continuous decrease in its figures during the whole analysed period.

Keywords: *higher education, graduate employment, market economy*

JEL classification: *I21, I23, I25, J60, J63*

1. Introduction

During the last few years, the relationships between higher education and employment has re-emerged as one of the major policy topics as well as a focus of research in Europe. Some decades ago, i.e. during the 1960s and 1970s, they had already been a key issue of higher education policy and research. Thereafter, this theme lost momentum (cf. Psachropoulos, 1987; Sanyal, 1991; Teichler, 1992), before renewed interest became visible from about 1990 Teichler (1997).

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2. Problems of the Romanian Higher Education System

The concerns of the society and economy of the XXIth century is moving towards creating a Europe of knowledge where people would have the ability to live and turn into a competitive knowledge-based environment. In this context, education stated that the primary factor in the complex and enduring creation, the development of knowledge-based society, the main objective of the European Union launched the Lisbon Strategy Ștefan and Chivu (2011).

Moreover, the university has, in this process, a fundamental role, a mission of prime importance in reforming the education system, to meet the current requirements of the labor market Ștefan and Chivu (2011).

To be and to remain competitive, the universities in Romania must be permanently connected to the changing of the requirements Ștefan and Chivu (2011).

Since 1999, significant changes to European universities have occurred outside the EU framework as a result of the Bologna Process, which has seen the closer alignment of higher education systems across Europe. 47 European countries participate, including all 27 Member States. The Commission, which is also a member in its own right, has played a key role in its development, particularly regarding mobility but also through the sponsorship and development of instruments that have become important parts of the Bologna Process House of Lords (2012).

Romania signed the Bologna Declaration in 1999, which aimed to form until 2010 a unique European space in the higher education and research field Talpos, Jivan and Popovici (2010). The decision factors declared their goal to harmonize education with the European Union educational systems. The alignment of the teaching system, with regard to its content and organisation, to the requirements of a society based on a market economy was also declared. The country's slow modernization being observed, an urgent solution to the problems caused by this reality was required. This could be through the professions provided by the educational system, through scientific research and through educational policies. Certain radical transformations were made Talpos, Jivan and Popovici (2010).

All these reform measures have apparently had noble goals, but improper methods for the Romanian spirit and values, lacking the necessary

coherence and the strategic thinking: exactly these goals have been altered, even turned towards market values, by models which are inappropriate for the educational system Talpos, Jivan and Popovici (2010).

3. The Romanian Graduate Employment

The renewed debates into the relationships between higher education and employment since about 1990 cannot be characterised by a single new development or challenge. Rather, many issues are concurrently raised in this context: the rising speed of turnover of knowledge required in jobs, the dramatic changes of the structure of the labour force in the wake of the introduction of new technologies and new managerial concepts, the globalization and Europeanization of the economy and society, the rapid "massification" of higher education since about the mid-eighties in many industrial societies, increased unemployment, declining transparency and continuity of careers, etc. Obviously, the signals higher education receives as regards graduate employment and work as well as the demands of the employment system are more contradictory and create more dilemmas than ever before Teichler (1997).

In the context of the economic transition process, the Romanian labour market has suffered significant transformations with regard to the volume and structure of the main labour force indicators Matei and Dogaru (2010). The main problems encountered in the labor market are related to the relatively low participation, particularly from certain social categories, high unemployment among certain population groups, low internal mobility, high tax revenues from the use of work force, the limited relevance of education to the labor market's needs and the existence of administrative and legal barriers that affect the functioning of companies and thus create jobs. these are the causes that reduce employment opportunities for the working age population and contribute to the encouragement of foreign migration Pociovalisteanu, (2011). The statistical data show that Romania, like other EU countries, faces a major problem of the labour market, i.e. young people unemployment. The unemployment rate among young people is three times higher than the average rate (20.8% as compared to 6.9% in 2009). The high level of employment among young people should be an important reason in applying some active policies that should aim at this vulnerable category. Within this group of unemployed people we usually find people who are not involved in training

activities, graduates from high school, occupational schools, as well as graduates from university immediately after graduation Herman and Dalalau (2011).

Romanian Development Regions have no legal personality, being not subject to administrative law, but the result of concentration achieved at inter-county level, corresponding to NUTS II division of the European Union. By agreement of the local councils and county councils four macroeconomic development regions have resulted, in conformity with NUTS I division of the EU, each of them being composed of two regions, so there are 8 development regions across the country. The main objective for establishing these regions is to access EU funds in a unified manner and to achieve an integrated development of infrastructure projects at regional level Avram and Pociovalisteanu (2011).

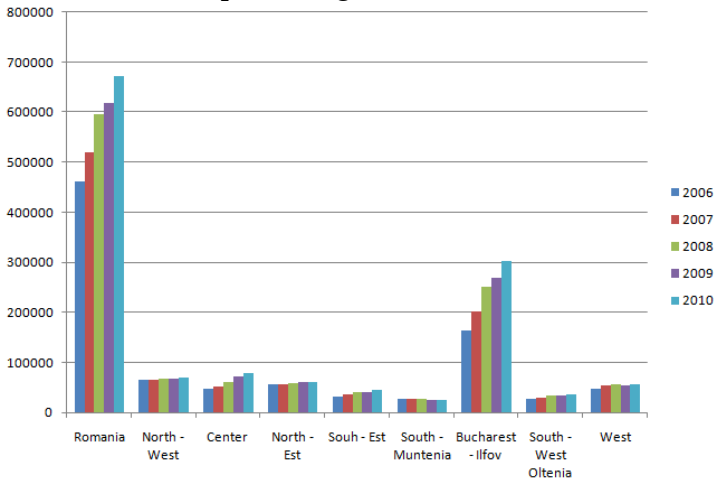
We aim at analysing the Romanian graduate employment rate dynamics during the whole analysed period: 2006-2010, as it will be seen further on.

Table 1. The Number of Female Graduates in Romania and by the Romanian Development Regions in the 2006-2010 Period.

Region / Year	2006	2007	2008	2009	2010
Romania	462740	520709	595369	618096	671696
North - West	64550	64878	68135	66455	68669
Center	46437	52520	61510	71187	79011
North - Est	54977	57101	58522	59492	61489
Souh - Est	31246	35079	40166	40853	43893
South - Muntenia	26131	26351	26726	23882	23976
Bucharest - Ilfov	164690	202755	252017	269718	303330
South -West Oltenia	26986	28897	33235	32637	34783
West	47723	53128	55058	53872	56546

Source: Eurostat

Figure 1. The Number of Female Graduates in Romania and by the Romanian Development Regions in the 2006-2010 Period.



Source: Eurostat

As Table 1 and Fig. 1 show, the number of female graduates:

- continuously increased in the 2006-2010 period at the whole country level;
- registered an increase trend, as well, by the eight development regions of Romania in the 2006-2010 period (with very few exceptions in some years of the period, in some of the the eight development regions of Romania) Popovici (2012).

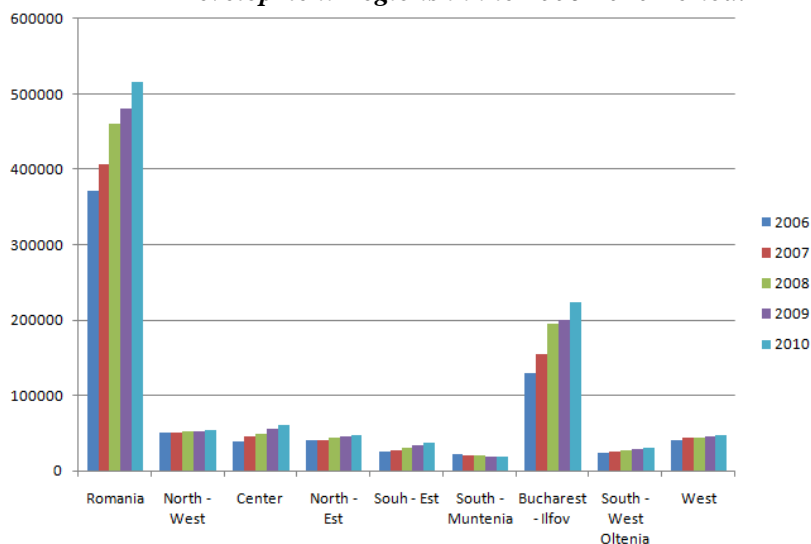
Table 2. The Number of Male Graduates in Romania and by the Romanian Development Regions in the 2006-2010 Period.

Region / Year	2006	2007	2008	2009	2010
Romania	372229	407466	461253	480092	516337
North - West	51208	51199	52130	52344	53310
Center	39181	44759	48399	54690	59704
North - Est	40125	40836	43472	45005	46490
Souh - Est	25887	27570	30816	34096	36787
South - Muntenia	21852	19855	19895	19260	18990

Region / Year	2006	2007	2008	2009	2010
Bucharest - Ilfov	129171	154886	194964	200382	223499
South - West Oltenia	23751	24805	27629	28271	29899
West	41054	43556	43948	46044	47656

Source: Eurostat

Figure 2. The Number of Male Graduates in Romania and by the Romanian Development Regions in the 2006-2010 Period.



Source: Eurostat

As revealed by Table 2 and Fig. 2, the number of male graduates:

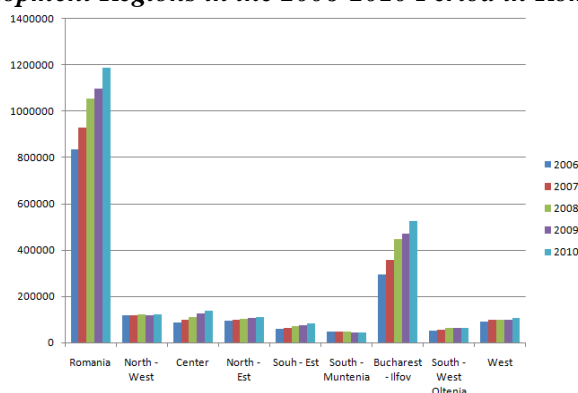
- continuously increased in the 2006-2010 period at the whole country level;
- registered an increase trend, as well, by the eight development regions of Romania in the 2006-2010 period (with very few exceptions in some years of the period, in some of the the eight development regions of Romania) Popovici (2012).

Table 3. The Total Number of Graduates in Romania and by the Romanian Development Regions in the 2006-2010 Period in Romania

Region / Year	2006	2007	2008	2009	2010
Romania	834969	928175	1056622	1098188	1188033
North - West	115758	116077	120265	118799	121979
Center	85618	97279	109909	125877	138714
North - Est	95102	97937	101994	104497	107979
Souh - Est	57133	62649	70982	74949	80680
South Muntenia	47983	46206	46621	43142	42966
Bucharest - Ilfov	293861	357641	446981	470100	526829
South -West Oltenia	50737	53702	60864	60908	64681
West	88777	96684	99006	99916	104202

Source: Eurostat

Figure 3. The Total Number of Graduates in Romania and by the Romanian Development Regions in the 2006-2010 Period in Romania.



Source: Eurostat

As Table 3 and Fig. 3 highlight, the total number of graduates:

- continuously increased in the 2006-2010 period at the whole country level;

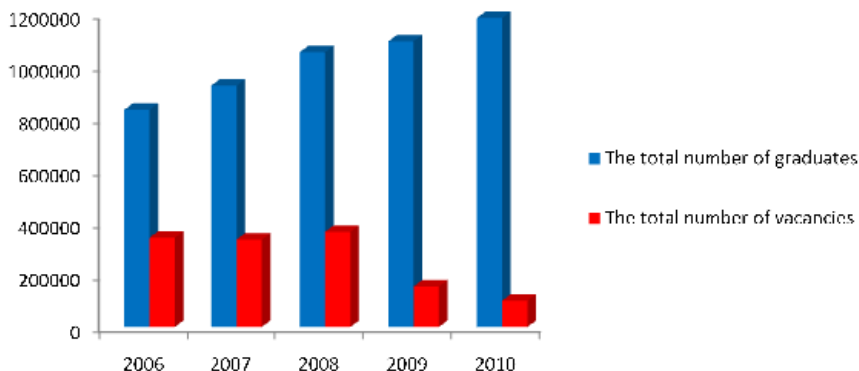
- registered an increase trend, as well, by the eight development regions of Romania in the 2006-2010 period (with very few exceptions in some years of the period, in some of the the eight development regions of Romania) Popovici (2012).

Table 4: The Total Number of Graduates and the Total Number of Vacancies in the Economy in the 2006-2010 Period in Romania

Years	2006	2007	2008	2009	2010
The Total Number of Graduates	834969	928175	1056622	1098188	1188033
The Total Number of Vacancies	343488	336128	365792	155625	101239

Source: (<http://epp.eurostat.ec.europa.eu>)

Figure 4: The Total Number of Graduates and the Total Number of Vacancies in the Economy in the 2006-2010 Period in Romania



Source: <http://epp.eurostat.ec.europa.eu>

As it can be noticed from Table 4 and Fig. 4:

- the total number of graduates continuously increased in the 2006-2010 period at the whole country level, while:
- the total number of vacancies in the economy:
 - decreased in 2007 to 336128, from 343488 in 2006;
 - increased in 2008 to 365792, from 336128 in 2007;
 - decreased again in 2009 to 155625, from 365792 in 2008 and in 2010 to 101239, from 155625 in 2009.

So, the total number of vacancies in the economy registered a decrease trend in the 2006-2010 period, except in 2008, when it registered an increase compared to 2007.

We name the ratio in percentages between the total number of graduates and the total number of vacancies in the economy the graduate employment rate, according to the formula:

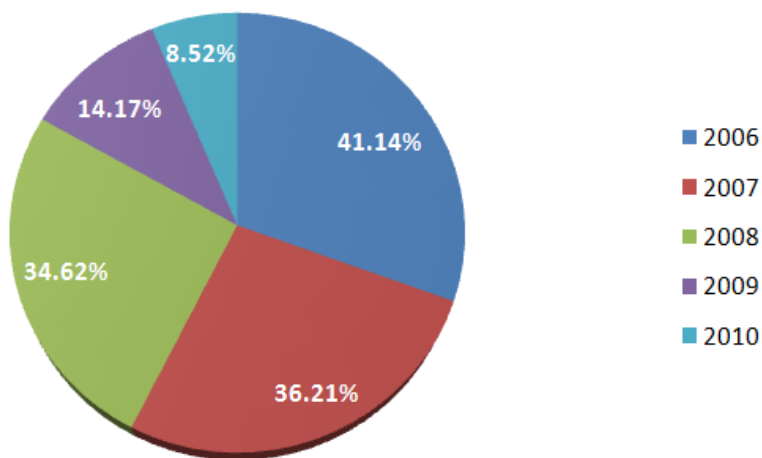
$$\text{The graduate employment rate} = \frac{\text{the total number of graduates}}{\text{the total number of vacancies in the economy}} \cdot 100$$

Table 5: The Graduate Employment Rate in the 2006-2010 Period in Romania (in %)

Years	2006	2007	2008	2009	2010
<i>The graduate employment rate (in %)</i>	41.14%	36.21%	34.62%	14.17%	8.52%

Source: (<http://epp.eurostat.ec.europa.eu>)

Figure 5: The Graduate Employment Rate in the 2006-2010 Period in Romania (in %)



Source: (<http://epp.eurostat.ec.europa.eu>)

With regard to the graduate employment rate in the 2006-2010 period in Romania, both Table 5 and Fig. 5 point out a continuous decrease in its figures during the whole period:

- it decreased from 41.14% in 2006 to 36.21% in 2007;
- it decreased from 36.21% in 2007 to 34.62% in 2008;
- it decreased from 34.62% in 2008 to 14.17% in 2009;
- it decreased from 14.17% in 2009 to 8.52% in 2010.

This continuous decrease in its figures during the whole analyzed period: 2006-2010 is the result of the correlation between the two opposite dynamics of the number of graduates and the number of vacancies in the analyzed period, and of the difference in their dynamics rhythm: the continuous increase at the whole country level, of the number of graduates, which is the counter of the ratio, according to the above-presented formula, in the context of a decrease trend in the total number of vacancies, which is the denominator of the ratio, with an increase in the total number of graduates much smaller than the decrease in the total number of vacancies.

4. Conclusions

The graduate employment rate registered a continuous decrease in its figures during the whole analyzed period. This continuous decrease in its figures during the whole analyzed period: 2006-2010 is the result of the correlation between the two opposite dynamics of the number of graduates and the number of vacancies in the analyzed period, and of the difference in their dynamics rhythm: the continuous increase at the whole country level, of the number of graduates, which is the counter of the ratio in the graduate employment rate formula, in the context of a decrease trend in the total number of vacancies, which is the denominator of the ratio, with an increase in the total number of graduates much smaller than the decrease in the total number of vacancies.

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INNOVATIVE METHODS ON MANAGING OF RESOURCES IN BANKS, CAUSED BY THE INFLUENCES OF THE CURRENT CRISIS ON THE WORKING PROCESS OF THESE INSTITUTIONS

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Abstract

Current actions in the economic circles were significantly caused by the work of the banks, but they also affect significantly the work of the banks. Therefore, the focus of this paper is on perception the novelties which should be applied in the approach of the work of the bank institutions, with a main goal to show the changes in the methods of the organization's work (financial). The working methods are comparative analysis and perception of the statistic results.

The conclusion shows that the securitization, defending some positions which are considered as classic in the economy, hedging should be continuously and actively managed, and never should surface passiveness and leaving things to flow by its inertia, because it turns back the economy towards its basic instruments and working with the most classic methods.

Keywords: bank, crisis, securitization, managing

JEL classification: G01, G21, M13

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1. Introduction

In 2007 around half of all mortgages, corporate bonds and leveraged loans in USA realized their work through securitization. This data is published by the American Securitization Forum - ASF, and together with analyses from Europe and Australia, gives the data that many of the firms that created most complex products suffered because they didn't understand completely the measures for monitoring or were not capable to use them to manage the risk. From these reasons, a new domain of activities of the financial institutions should be finding a way and appropriate part for the securitization, which won't detonate again with its functioning. Besides the securitization, the bank institutions, but also the financial ones are faced with new challenges and models of working which significantly point out the need of change in the managing, as well as in the working and placing the resources.

2. Securitization

Appearing in the 70s of 20th century, the securitization created space for a big range of usages and possibilities and ways of using the instruments and technologies for the investors, creditors, banks, even for the legal officials. Until 2007 its usage went up. Today's occurings made the bidders, investors, dealers and regulators to turn to the Basic forms of securitization. The prognoses are moving in direction that the complex forms of securitization won't appear again before 2010. However, this is not that bad if we consider the opinion economic experts have "people were going into debts only so they can perform a securitization of the debt" (Kiviat, 2009, p.2), which in any case is not a good path and current for the economic cycles. Economy should always be based on real fundamentals.

To direct forwards it's better to maintain the securitization in its simple form, what economists define as declarations of this type: it's really not necessary to divide and cut things into 50 pieces or overloading them by mixing derivatives like credit-default swaps. (Kiviat, 2009, p.2) Besides the large amount of created instruments, other domain in which financial institutions should direct themselves is the volume of transactions, it's necessary to make bigger review of quality, credit rating agencies to perform ranking, financial companies shouldn't lead off-balance sheet accounts, but

work with bigger responsibility. Therefore, a question is posed, how much extra lending can the economy afford, and regarding the seriousness of this question, it's better for the entire economic work to be within the regulated frames and limitations.

Staying within the frame of rules doesn't mean to delete certain lending from the existence of financial systems. On the contrary, they should exist, but in the allowed and regulated frames, which means using certain instruments only if the conditions for their use is fulfilled.

3. Too big to fail

Besides securitization, a new domain that has to suffer certain changes in the financial sector are the big banks, i.e. "too big to fail".

After the financial crisis, some economists hold the statement that the biggest banks used the financial crisis in their benefit and after the legislative, which is expected from House Financial Services Committee, the biggest firms will have to pay on many different levels, which will of course affect their growth, liquidity reduction, expenses rising. Firms will be asked to own more capital, pay bigger insurance premiums, have new potentially expensive convey

able debt instruments, and pay certain amounts to new funds for protection from the systemic risk and to face the restrictions. The new legislative will make it easier on the government in the possibility to help or close the institutions which thinks are unsuitable for work. Even some reflections go towards adequate spending protective agency that will demand the national banks to make an international operationalization and standardized use of derivative trades, which will be centrally managed or realized through exchange. It's true that the enforced strategy for rearranging the big banks will affect their work, but on the other hand we can see reflections such as "if most of the big bank organizations maintain the bills properly, they will divide and go smaller." (Kepler, 2009, p.2)

Biggest critics send to „too big to fail“ institutions come from the fact that according to the reforms they will get advantage through the refunded resources. As an answer, the institutions come out with the position that the legislative, on the contrary, comes out with restrictions for the big banks, the big banks are under pressure due to the current occurrences and the regulating of the derivatives. The entire change in the regulative measures must be cautious

with the measures not to cause negative effects on the financial institutions' work. More often it is mentioned owning of a so-called contingent capital, a new form of borrowing which is transformed in capital in moments of crises and these crises are on the other hand considered by some experts to be most probably an expensive instrument. The big banks are also faced with the possibility of increased expenses for the debt because of the limited or interdicted access to the Federal Home Loan banks.

Calculations show that the trend is directed towards harming the big banks, on the difference of smaller ones, because the big banks are relying more on alternative deposits sources. (Kepler, 2009, p.2)

4. Working method

Another significant question is time, i.e. when the banks should rely on the new legislatives and how they will be applied, whether it will be for everybody or there will be situations like "from case to case".

All these domains of conduct that is forthcoming to the work of the financial institutions, especially with the predicted reforms look for a thorough analysis of the entire system because under the bills reforms, the big (systematically) important institutions should:

- Pay taxes for the funds that are predicted from the new revolution
- Pay to the new agency for consumers protection
- Face the bigger demands for adequacy of the capital and the level of leverage
- Have in consideration the potential "fragility" due to the new interagency council
- Cleaning most of the derivatives through exchange
- Expose themselves to bigger debt expenses (Kaper, 2009)

All above mentioned tasks show that changes are inevitable and that the domain of activities of financial companies must change. Those changes and that new direction of working is caused by the economic crisis from 2007, but also by the need to overpass it and not to take maturity and consequences as the big depression.

Now, the most important question before the financial institutions is overcoming a very sensible situation which is easily transmitted from

continent to continent. This economic unbalance is a situation where someone benefits, but those losing pay a very high price for it.

The domain of activities has to be directed towards overcoming the problem and directing its resolution in a way to charge those that are responsible and have merits for it, and to help those who should get help.

This entire situation is difficult because of the chain alike financial institutions and the chain alike financial institutions in the world, together with budget deficits, instable bank systems, distrust of the clients.

Further down are shown two graphics that give description of the level of prices and instability of the institutions, depending on the type (whether it's about banks, insurance companies or financial conglomerates). Specific turbulences are noticed around year 2000 and in 2006 the trend shows potential changes. The analysis is performed through institutions in the European Union, for 265 days (trading days).

The biggest variations are shown in the bank sector. The connection of the periods with the economic cycles, i.e. the economic unbalances is big. All this imposes the question whether the specialized working is more justified then working with more instruments?

The answer to this question is found in the right diversification, but also in the caution, not to over subvention the work, but also not to be put under restrictiveness which will cause repellence.

Figure 1: Changes of prices for the banks, insurers and conglomerates, 1995-2006

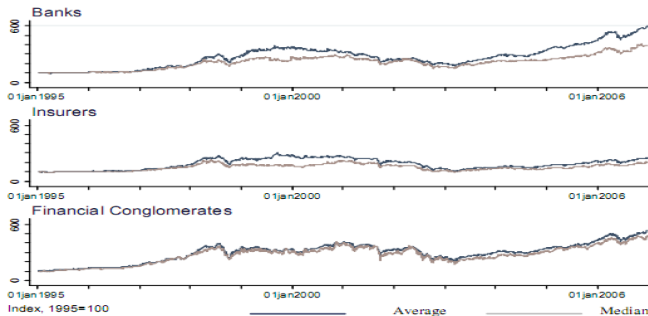


Fig. 1. Price movements for bank, insurers and conglomerates, 1995–2006.

Source: Iman van Lelyveld, Klaas Knot, “Do financial conglomerates create or destroy value Evidence for the EU”, Journal of banking and Finance 33 (2009)

The graphics show the arithmetic middle and median in order to make a comparison between the banks, the big financial companies and the insurance companies. The insurance companies are usually maintaining at the lowest level, but we can also notice a big variability in the period around the year 2000. This is because of the economic occurrences in this period and the fact that some of the countries were affected by the economic imbalances.

Figure 2: Instability of the banks, insurance companies and conglomerates, 1995-2006

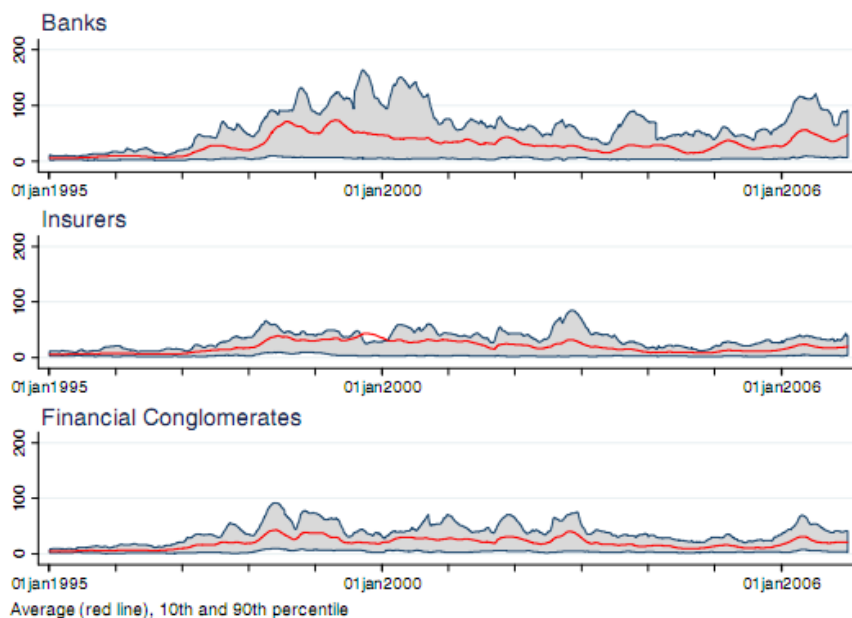


Fig. 2. The volatility of bank, insurers and conglomerates, 1995–2006. Source: Datastream.

Source: Iman van Lelyveld, Klaas Knot, “Do financial conglomerates create or destroy value Evidence for the EU”, *Journal of banking and Finance* 33 (2009)

Another domain that has to be analyzed in the economic work is the hedge funds. Some studies show that the endurance of these funds is connected with their size and the time of existence and the fact that the

investment flows follow the past occurrences and by the years the managing of these institutions is passivized. From that reason, small and new funds show to be better.

These analyses are made from the reason that these institutions got important especially in the last years. Further down is a table that shows the characteristics of the funds in America for the period from 1995 to 2004, according to the years and style.

Table 1: Collective statistic

year/style	number of hedge funds	average size (million)	average annual surplus turnover (earnings)	average timeline (months)	average annual investment income
A. Funds by years					
1995	1076	\$ 74	12%	40	40%
1996	1289	83	14	42	88
1997	1520	103	13	45	126
1998	1723	97	1	48	56
1999	1955	116	27	50	79
2000	2125	122	5	53	88
2001	2379	171	3	54	91
2002	2580	180	1	56	67
2003	2460	238	16	66	103
2004	2089	349	6	78	48
B. Funds by style					
Security selection	838	\$137	16%	52	86%
Managed	234	155	11	54	71
Relative value	231	169	7	46	94
Multiprocess	248	260	10	59	83
Funds fund	653	109	5	54	49

* The average annual surplus turnover is net of all the expenses and taxes and it's a rest of the rate of US T-bill. The average income of investments is a percent of the prior-period capital.

Source: Nicole M. Boyson, "Hedge Fund Performance Persistence: A New Approach", Financial Analysts Journal, Vol. 64, No. 6, 2008

The analyses show that the portfolio of the new, small and well managed funds over the past is better on average of 10 % than the old ones, big and modestly managed hedge funds.

The table shows how much the number of these institutions is growing, but more importantly the perception of their correct use. The object of the analyses made in the domain of hedge funds is the right choice for investors, and the conclusions lead to a choice of new and small institutions well managed in their work and they showed good results for their time of existence.

Therefore, the accent is especially put on the management and caution, in sense that the economic markets don't allow passivity and a constant caution is needed, besides the fact that sometimes the markets look like they are under complete control and order.

5. Conclusions

At the end, in order to perceive the domain of activities of the financial institutions, it would be good to look the benefit from the diversification. When the turnover, the standard deviation, the asymmetry coefficient, the coefficient of leveling are considered as important factors in the determination of the uses of diversification, then it depends a lot from the country¹. This is because of the estimation that the earnings from the international diversified portfolio are paid off if one of the investments is in the USA, but there are also investments in countries outside of the USA.

In total, the domain of work of the financial institutions suffers changes. Some improvements in the economic working are already in the light because the last economic imbalance didn't contain as much as expected, but it doesn't mean there are no consequences. That's way is needed a reform of the

¹ Leyuan You, Robert T. Daigler, "Is international diversification really beneficial", Journal of Banking of Banking and Finance 34, UK, 2010, p. 173

financial system which will respond the needs of modern living, but in the same time it won't bring the same living into danger.

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THE REVOLUTION OF DIGITAL TECHNOLOGY

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Abstract

Like any other revolution, the one that we are living nowadays will cause victims. The Mass-media and the retail have been already hit rising of the digital technology, the same as in the past in the days the confection factories, entailed the end of the loom, and the appearance of the Ford Model T brought to extinction of the blacksmith on the market. If we look now to the future factories, we will probably get frightened on the idea. Not only will the manner be affected, but also the place where the objects will be made as well.

This paper present an interpretations of the answers following the questionnaire worked out last year and its results will be useful for both the research and the actors of the economy of on line market.

Keywords: digital technology, electronic environment, rural environment, electronic commerce

JEL classification: E42, L81

Beginning with the XVIII-th century, Great Britain has passed through a feudal progressive change centered on the ownership over the land, a force in the industrial era that came into being. In 1750, Great Britain was already an important sea and commercial force but most population lived by agriculture. Industrial activities such as mining and iron processing were developing at a low scale and London was the only really large city.

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Along the century, the change was so slow that it was almost unperceivable. Most of people thought that their life was part of a traditional natural order and didn't realize that a new historical stage was developing in their eyes.

This period in England's history is known as "industrial revolution", although the transformation process entailed progress in different fields, many of them didn't have anything in common with the industrial process, but worked together on the economy, with such spectacular outcomes that they could be considered revolutionary.

A series of inventions and discoveries have transformed textiles and metal processing in the well-known industries in the world. New sources of energy - especially steam engine, were turned into account. Coal exploitation was the fuel of this revolution and the growing population ensured the labor force needed and a market for the industrial goods (products).

A fast revolution of transportation means brought about a lowering regarding the costs of transportation for raw materials and products; also, the "agricultural revolution" ended the fear of hunger and became the support for a growing population.

The second industrial revolution appeared at the beginning of the last century, when Henry Ford showed what a real assembly line looked like and opened the era of mass production. Both processes led to the welfare and urbanization of the western population. Now, we are preparing for a new change, digitalization of production. The outcomes of this phenomenon will be noticed on a large scale.

The number of technologies that are passing through this change is impressive, we have intelligent soft, robots with amazing dexterity, unknown materials, new processes (3 D printing, similar to the cloning for example) and a large range of online services. Not long ago, the main characteristic of factories was the capacity to produce billion of identical objects: within this context we have to interpret Ford' famous statement telling the clients that they can choose any color for they car, on condition to be black. Today it isn't so expensive to produce small lots of different products, made for each customer. We therefore guess that the plant of the future will be built on the principle of mass personalization. And that it will be built most likely as the small houses of weavers during the XVIIIth century than the assembling lines of Henry Ford.

Nanotechnology optimized the world around: now there are bandages that heal not only protect the wounds, engines that are more efficient and household's pots that can be cleaned with less effort. And men of science are working now with genetically modified viruses that will be used on a large scale in producing different objects such as bacteria.

Practically, once this engine is launched, it's less probably it could be stopped paying attention at the disappearance of the communication barriers between designers and engineers, thank to the internet. In order to build his huge factory, in River Rouge, Henry Ford had to contract serious loans. If he had lived in our days, he wouldn't have needed but a laptop and the wish to innovate.

Like any other revolution, the one that we are living nowadays will cause victims. The Mass-media and the retail have been already hit rising of the digital technology, the same as in the past in the days the confection factories, entailed the end of the loom, and the appearance of the Ford Model T brought to extinction of the blacksmith on the market. If we look now to the future factories, we will probably get frightened on the idea. Not only will the manner be affected, but also the place where the objects will be made as well.

Until now, the companies preferred to move on in states with cheap labor force, but this argument starts to lose from its importance. Producers prefer to get back on the rich markets not because the wages pretension of the Chinese increased., because they want to be near to their costumers, but as they want to be very close to their clients to have a rapid answer to any demand modification. There are objects so sophisticated that as managers you prefer to have the projecting and production units in the same place. According to a Boston Consulting group analysis, until 2020, between 10% and 30% from the imported products by US from China in domains like transport, IT, mechanic installing will be made on the domestic market, fact that will cause a rise of American production with a great amount of capital, between 20% and 50% billion \$, and this fact could have a positive impact on EUROPE.

The Government of each state has a reflex to hedge the industries and companies that exists, not the once that once that want success and destroy the firsts. This is have the commodity how the capital injection could be explain in old factories without any futures but also the conflicts with the managers who want to relocate their production.

I think it is the time that the governments pay attention to the rural areas where the value can be turned into the IGP of the respect of country. Some government has already done it but Romania is getting stubborn in reacting. They spend billions of euros to back some sectors but they are not sure that this sectors can represent the real future and ignore the rural development examples that have proved to be efficient in US and west of Europe.

Unfortunately the government succeeded to wrong estimations and it's hard to believe that they will adapt to their new phenomenon where plenty of entrepreneurs and amateurs put their projects online and take benefits from the internet business. The revolution began a long time ago, and if they want to be useful the governments must be focused on the simplest responsibilities: teenager's education, preparing qualified, labor force, right adjustment and granting equal chances for rural and urban environment.

The European Commission warned many times on the hard access to high speed internet in rural areas in certain countries within the Union, outlining Romania is the last on the ranking with 20% under the rural environment.

If in on the development countries, 93% of the Europeans are getting happy because the access on big speed internet, in some states like Greece, Poland, Slovakia, Bulgaria and Romania the figures are bad.

UE outlines that the access to the internet in making that some small and medium companies can become more competitive and productive with synchronizing International markets. The rise of the internet connection for the villagers is a major target for UE.

According to a communication that has been delivered recently by Eurostat only 50% of the Romanian people aged between 16 -74 had ever used a computer, as compared to 96% in Sweden, 94% in Denmark and Holland, 93% in Finland or 91% in U.K. The European average is 78% and last but not least before Romania is Bulgaria with 55%.

Eighty-one percent of Romanian young people with ages between 16 and 24 used at least once the computer, also the lowest percentage of E.U., compared with the average of 96% on the E.U level and 100% in many countries such as: Holland, Austria, Finland, Sweden, UK and Luxembourg.

In Bulgaria 87% of young people used at least once the computer and in Hungary 98%.The data have been collected in 2011.

A poll presented by Eurostat in December last year showed that more than half of Romanians with ages between 16 and 74 had never used the

internet, and 1/3 of Romanian households have access to the internet connection and this fact is situating Romania on the last position within the E.U.

Romania internet users are poorer and poorer shows the study "The Profit of Internet users". According to the study managed the research department of TradeAds Interactive, 27% of the interviewee said that monthly incomes are under 1000 lei, compared to 25,5% in January 2011 and 15,35% in March 2010,outlines this. [4]

The research was made on a poll with 23 questions, delivered on line during 23rd February 2012. The volume of samples was of 3314 respondents and each identification has been done by a cookie system and email addresses. Only 10,2% of the interviewed people said that the monthly incomes are over 5000 lei. The study also showed that the information need of Romanian people has increased the surpass which had the most spectacular raises of users interest are: technology(+9,8% compared to 2010),education(+8,6%),art, culture and society(+6,8%), shopping(+6,4%) and sport(+5,7%).

According to the communication the Romanians people are using the online environment to socialize so that in 2012 41,9% of the interviewed people stated that they used the social network as compared to 30,1% in 2011.

The electronic commerce is expected to develop during the next year because in 2012 the number of people who buy and sell online produces has increased with 13% as compared with the similar period of the last year (20,4% in 2012 as compared to 15,3% in 2011).

According to the study "The Profile the Internet Users"the gadgets are among the Romanians preferences when they want to access the internet. There is a diminishing of PCs and desktops and an important increase of internet access from laptops and notebooks. Connection on mobile displays of smart phone type like has a spectacular evolution, registering a 15'2% quota as compared to 9% in 2011.

The most receptive users for on line advertising are persons of middle age or aged and who have medium or few studies. It is for this category that advertising banners have an informing potential unlike the young persons with high income, academic studies for who advertising within on line environment is considered rather annoying.

During the visits in Sweden within the research program, I could notice the benefits of the internet both in the rural area and the urban one. Sweden is being expected to become the first European country that gives up cash in

spite of the fact that it was the first to introduce the banknotes in 1661. According to an article from Associated Press, Sweden is ready to eliminate cash money in favor of electronic methods. In most cities cash is no longer accepted to pay tickets in transport, and they have prepaid cards or bought with SMS form the cell.

More and more shops accept but debit or credit cards and some banks headquarters where electronic transactions are being carried out no longer have cash.

We can realize what tall this might imply for those inhabitants within our rural areas, if in Sweden there is the problem for old people who have no credit cards or who do not know how to use them.

The decline of using cash is obvious in churches too. In Carl Gustav Karlshamn, the vicar Johan Tyrberg installed a card reader for donations. Banknotes and coins represent only 3% of Sweden economy as compared with a 9% within the euro area and 7% in USA. Giving up cash money has great advantages. According to the Association of Sweden Bankers the most important would be the low rate of criminality.

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CRAWLING – A SOLUTION FOR EFFICIENT E-GOVERNMENT. STUDY ON ANTI-COUNTERFEITING TRADE AGREEMENT (ACTA) FOCUSED ON SOCIAL MEDIA

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Abstract

The applicability of Web 2.0 as an e-Government tool is still a fully unexploited area due to the software novelty in this regard and the lack of commitment of public bodies. The current paper sets out to offer a solution to acknowledge information of public interest that might be of use to an e-Citizen. Currently, social networks have proven useful in keeping in touch with friends, research, collaboration and political activism. Data mining through social network is a relatively new subject, which has been intensely approached by researchers as of late. The results presented in the current paper have been obtained using a crawler on Twitter.

Keywords: social media, crawler, e-Government, ACTA, e-Citizen

JEL classification: C31

1. Introduction

The development and wide adoption of social networks among domestic users has opened a completely new way to investigate subjects for sociologist and all other researchers focusing on social relations and/or user interaction

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observed from a completely new perspective and at a total different scale. Some approaches (Catanesi, 2010) try to cluster groups of users using k-men or hierarchical clustering algorithms using as a criteria friendship relations. Other approaches (Bonneau, 2011) try to randomly extract user profiles to integrate them in a global social graph. Some (Mislove, 2007) take a wider approach by comparing among themselves the most relevant social networks nowadays.

Inspired by the research (Yoon, 2008) that shows that social networks potentially influenced how and why ideas were taken up in the educational system, this paper studies the way communities of users can be clustered around ideas/concepts commonly shared by the group. In our case the resulted social graph instead of mapping the friendship relation will map users that share the same/related ideas.

In the first part of this paper we present some basic, general concepts about social networks, we continue with a brief introduction in the most important technical aspects, required to interact with any web service nowadays.

Our study continues with a description of the first crawler version with a pipeline structure, each module being specialized in dealing with a single work segment. This basically fetches tweets that contain a specified set of keywords and generate the social graph and results. Although simple in architecture this crawler allows users to obtain a deeper understanding of how the clusters of users look like for specific keywords' set but it still has some limitations. The most important limitation is that it could not answer the question if the data shared by two or more groups of users is related so that subgroups could be merged together.

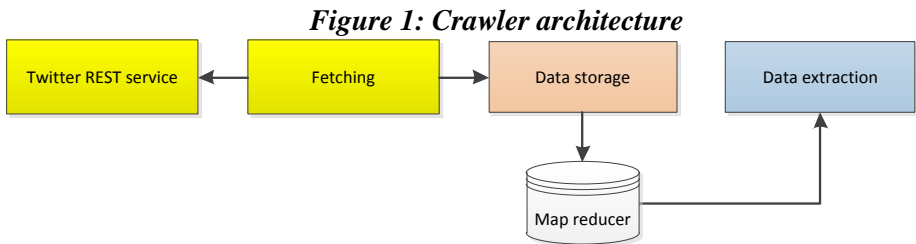
We improve our crawler by adding new modules that allow us to fetch the web content that the tweets are pointing to. Using the (Luhn, 1958) algorithm we summarize this content and extract keywords. The resulted set of keywords is used to check if subclusters can be merged together and extract related concepts/keywords.

2. Crawling

The purpose of our work is to study how user communities are mapped around different ideas/concepts/content that they collaboratively share. To study the phenomena we have created a crawler that helps extract meaningful information that we need. We have started with a classical approach that has a

pretty simple architecture, yet it is quite effective, composed of multiple modules connected in a pipeline. Each module abstracts an individually specific functionality that allows our system to be extended for other social networks, changing the way the data are stored and analyzed, adding new functionality.

The crawler is composed of three main architectural blocks: a fetching module, a storing module and a data extraction module that are depicted in the **Error! Reference source not found.** We will continue with a detailed description of each module.

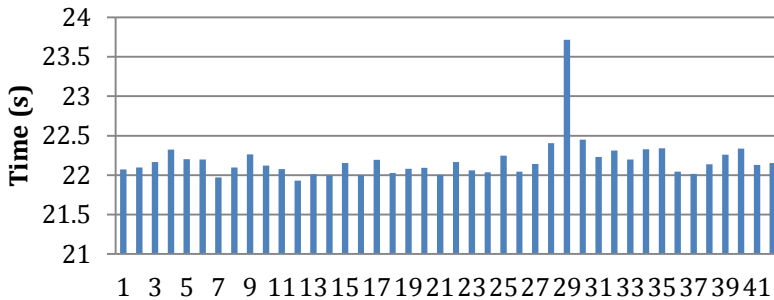


3. The Fetching Module

The fetching module interfaces with REST services exposed by Tweeter, its main purpose is to extract all required information using as search criteria a list of keywords. On designing the fetching module we have to face some technical challenges.

The first problem we had to solve was related to the time required to fetch a single page of results that contains roundly about 100 tweets. As depicted in the Figure 2 the time required to gather a single page may vary from 22 to 23.7 seconds, which is a huge amount of time if we consider the immense size of information that we have to collect. The simplest solution was to create multiple processes, each fetching a single page of content.

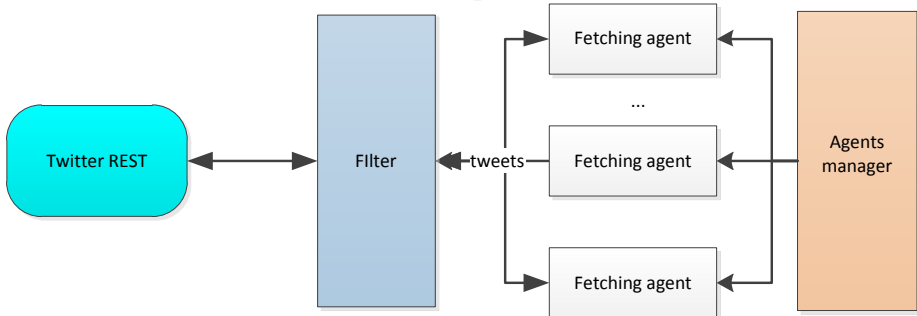
Figure 2: Fetching time variation



Page fetched

We have improved the fetching rate by creating multiple fetching agents supervised by a manager – see **Error! Reference source not found.** The purpose of the manager was to control the optimal operability of fetching agents. For instance: if one agent fails on a critical exception, the manager has to start a new agent that is able to fully replace the dead one. On finishing the task, the agent informs the manager; the agent will receive a new job if there is any or will be disposed. Technically speaking, the agents' management can be summarized to forks, joins and synchronizing signals, it makes use of a parallel programming paradigm.

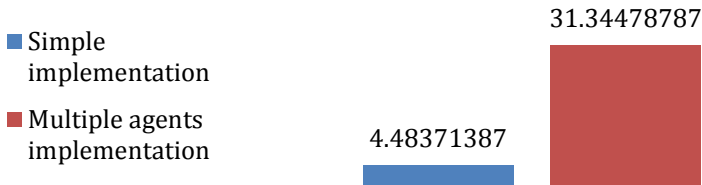
Figure 3: Multiple fetching agents



In Figure 4 the performance differences between implementations is presented. The fetch rate of the multi agent system is superior, about eight times larger, in comparison to simple implementation. However, the number

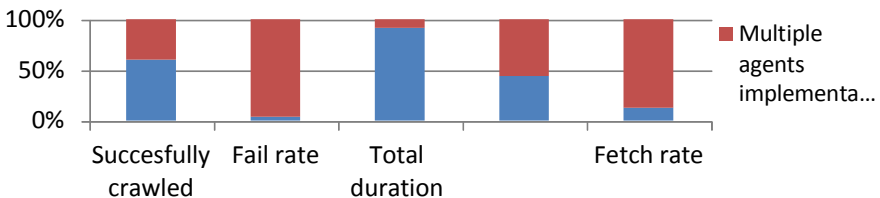
of incorrect or incomplete fetched tweets has increased as well for the parallel system, one of the explanations being that the Tweeter protection mechanism service imposes some restriction to the number of requests that come from the same IP address.

Figure 4: Multiple fetching agents



The fetching time for a single page increases in the case of the parallel implementation because of the overhead required by all the collaboration work of the fetching agents with the manager.

Figure 5: Single versus multiple fetching agents



All the above results were obtained by fetching 10000 tweets that contain the “intel” keyword using maximal allowed of 100 results per page.

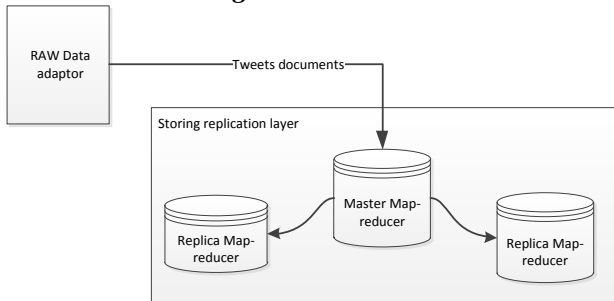
To ensure fair access to their platform Tweeter imposes access limitation to each client that limits the number of tweets to a specific amount of time. Maybe the greatest challenge that the fetching module has to solve is that all fetching agents have to be fully recoverable in case of failing, service not responding or any connection problems. The agents will resume their work after they are shut down in case of any critical exception; this was technically solved by adding to each agent something like a state observer that has the simple purpose to watch the fetching execution and in case of exception to save the state before exception occurring to disk, using the state a new agent can resume the work started by obsolete agent.

The filter subcomponent allows us to improve the quality of fetched data by eliminating from the start undesired results; it allows filtering the locale, language, the geocode or period of tweets. This may prove useful if for e.g. we may want to fetch the data only from a specific region, from users that are specking a specific language or just we may want to extract the information from a specific date.

4. The data store module

This module interacts with the fetching module and stores data in a map-reduce service, the conceptual architecture is presented in Figure 6. As it may be observed this module is composed of a RAW data adaptor, which transforms data received from the agent to standard JSON objects that are later stored in the map-reducer cluster.

Figure 6: Store module



We chose to use the map-reducer instead of a traditionally SQL database having in mind tree main reasons: the first and the most important one is that map-reducer allows the storing of generic documents, so we would not spend any more resources to create and maintain an entities-relation schema. Basically, the map-reducer allows us to operate on a higher level with the document stored. The second reason for choosing map-reducer is the replication built-in-mechanism; we need that if we want to process tons of documents on multiple machines. This also allows us to instantiate a multitude of crawlers cooperating to fetching the same dataset. The last but not the less import reason is that it allows keeping the full history of documents.

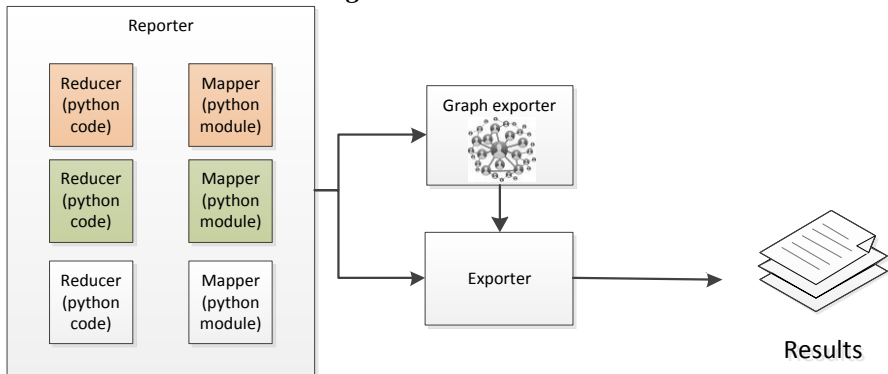
Internally the map-reducer is a key value storing system, the content stored at a specific key in our case is just a simple JSON object that is another

important aspect of the storing system because this abstracts that data representation form any operating system or programming language; an example could be observed as follows:

5. The data extraction module

We have presented the way we fetch data, how we store them. Now let us take a look at how do we actually use them. As displayed in Figure 7, the analyze module is composed of three main components: graph builder, content analyzer and core; let's take them one by one.

Figure 7: Extraction module



The reporter is the core component of the system; it is composed of a collection of python modules that interact with the map-reducer to perform a specific task. The system may be extended by simply adding new module of the same nature. Each view module is composed of a reducer and a mapper. The mapper defines what information to be extracted from map-reducer - this is somehow similar with the selection from a traditional relational database. The reducer defines the way data is aggregated in the final result. For a better understanding let's take a look at a trivial example that extracts all entities from all tweets.

Table 1

Mapper	def	Reducer	def
entityCountMapper(doc):		summingReducer(keys, values,	

	rereduce):
<pre> if not doc.get('entities'): import twitter_text doc['entities'] = getEntities(doc) if doc['entities'].get('user_mentions'): for user_mention in doc['entities']['user_mentions']: yield ('@' + user_mention['screen_name'].lower(), [doc['_id'], doc['id']]) </pre>	<pre> if rereduce: return sum(values) else: return len(values) </pre>

The graph builder is the subcomponent that builds the tweets social graph, we use this component to perform analysis about the connectivity of the network, isolated sub graphs, topology of user groups etc. The exporter is a trivial component that is exporting data as reports.

6. Results

We have chosen to study how users were grouped around the “acta” keyword and what other keywords could be identified as associated with it. For our study we have gathered 75663 tweets for main term “ACTA” being used, 12723 tweets for “SOPA” and 32370 tweets for “ANONYMUS”; detailed information can be depicted in the following table:

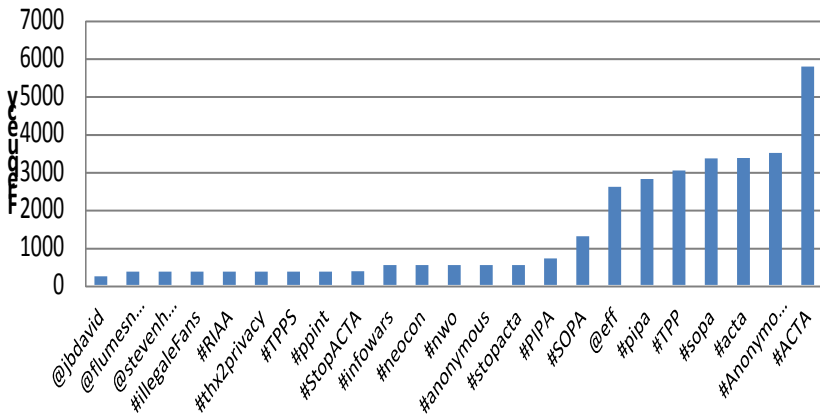
term	tweets fetched	size (MB)
ACTA	75663	114
SOPA	12723	17.9
ANONYMUS	32370	47.1

7. Extracting meaningful information from entities frequencies

We have extracted the most frequent entities that we could find in the fetched tweets, by doing that we have identified other important ideas that were possibly related to the main concept. As it can be seen in the next chart we could identify terms such as *pipa*, *anonymous* or *sopa* that are highly

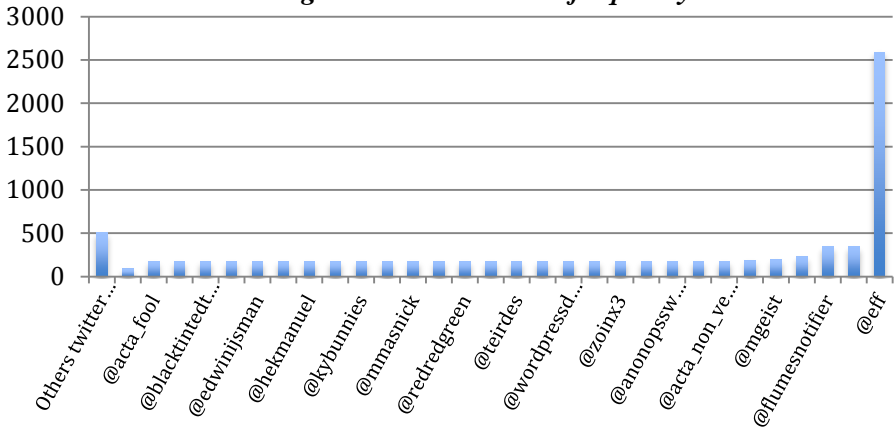
interconnected with the main idea of acta. Also the most cited users can be identified.

Figure 8: Most frequent entities for search term 'acta'



Another interesting fact that we can observe just by analyzing the frequencies of the entities is that we could identify the users with the biggest number of citations. These users are the in the middle of communities, their activity has a big influence, we call them leaders. In the following chart we can see the number of citation for each user. What is interesting to see is that we have a leader with a huge amount of citations, now let's take under the scope the first of them and see which actually has the biggest influence. We can observe that leader @eff has a tremendous number of citations but the real question that we have to ask is that @eff has so many citations because it has a lot of followers or because the content posted by him is relevant to others. To answer that question we have to take a look at the following charts to observe that @flamsnotifier has actually the biggest influence because he has only 51 followers and his.

Figure 9: User citations frequency



Content is cited 348 times, it has a 6.82 influence compared with @eff that has an influence of 0.032.

Another important fact that can be concluded from these results is that user @youranonnews that has the biggest number of followers 581200 it has just 181 citations that make it the leader with the worst impact; this is somehow explainable because this is a user that posts generic news so it has a large audience that is not specifically interested by the “acta”.

Figure 10: Followers count

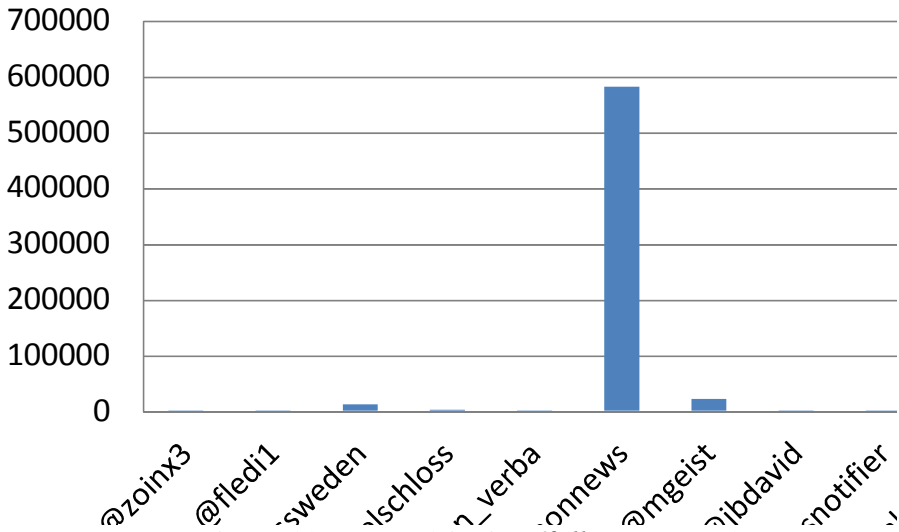
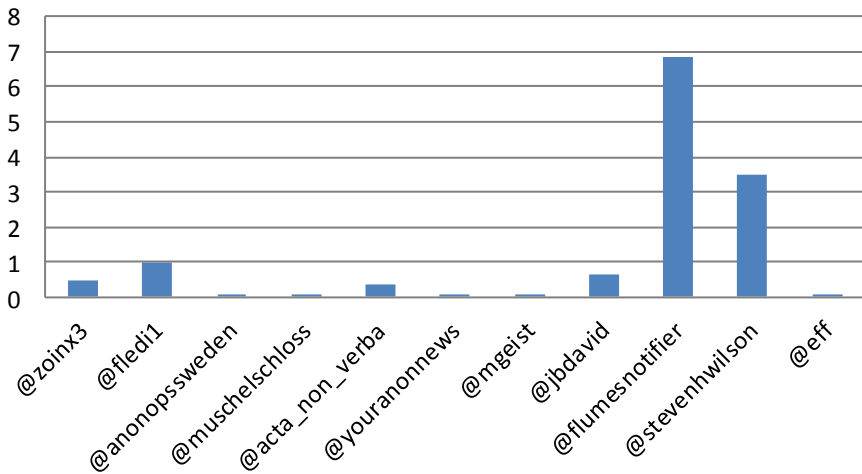
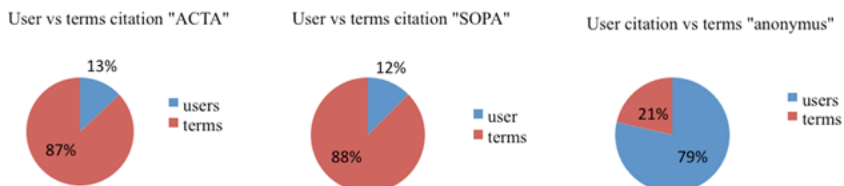


Figure 11: Impact (citations/followers count)



8. Extracting meaningful information from frequencies' entities

One important question that arose is what is the most cited entity type by users or the related concepts. To respond to that we have to take a look at the next chart and see that for acta and sopa there are more concepts entities than users, we may conclude that acta and sopa terms are more general terms that do not have any personal note for the users. In the case of the anonymous term we can see the personal influence of the users, because anonymous is a community formed from his users.



9. Conclusions

We have created a twitter crawler that allows for the procurement of results starting from keywords. Afterward, we have achieved the optimization of the crawler by making use of multiple agents. A comparative analysis of the created systems was undertaken. The simulation of the e-Citizen behavior in relation to current subjects of civic interest was accomplished by using a sensitive subject: the Anti-Counterfeiting Trade Agreement. The results were extended by using a determination system of words frequently showing up in relation to ACTA, these later becoming keywords for crawler. In the foreseeable future our research will focus on extending the advantages provided by crawler by use of links and parsing of pointed pages. The obtained results at the moment are a starting point for our research and extending them to e-Commerce, e-Health and, not least, e-Government are the next step.

10. References

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